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FOR SESSION 1919-1920

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FOR SESSION 1919-20

MONTREAL:

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ACADEMICAL YEAR, 1919-1920

SEPTEMBER, 1919

1	Monday	Labour Day. Library closed.
2	Tuesday	
3	Wednesday	
4	Thursday	Royal Victoria College opened, 1899.
5	Friday	
6	Saturday	
7	**SUNDAY**	
8	Monday	Last day for receiving applications for the Matriculation Examination.
9	Tuesday	
10	Wednesday	
11	Thursday	Finance Committee.
12	Friday	
13	Saturday	
14	**SUNDAY**	
15	Monday	Conservatorium of Music opens.
16	Tuesday	
17	Wednesday	
18	Thursday	Matriculation Examination begins. Exhibition, Scholarship and Supplemental Examinations in Arts.
19	Friday	Strathcona Medical Buildings opened, 1901
20	Saturday	
21	**SUNDAY**	
22	Monday	
23	Tuesday	
24	Wednesday	
25	Thursday	
26	Friday	
27	Saturday	
28	**SUNDAY**	
29	Monday	Meeting of Governors. Special Registration day for new students.
30	Tuesday	Special Registration day for students previously enrolled.

OCTOBER, 1919

1	Wednesday	Lectures begin in Arts, Applied Science and Law. Opening address by the Principal at 5 p.m. in the R. V. C.
2	Thursday	Physics Building Committee.
3	Friday	Meeting of Faculty of Arts.
4	Saturday	Meeting of Faculty of Medicine.
5	**SUNDAY**	
6	Monday	Founder's Birthday. Library Committee. Museum Committee. Meeting of Faculty of Applied Science.
7	Tuesday	
8	Wednesday	Regular Meeting of Corporation.
9	Thursday	Finance Committee.
10	Friday	Summer Essays in Applied Science to be sent in. William Molson Hall opened 1862.
11	Saturday	Interclass Sports.
12	**SUNDAY**	
13	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
14	Tuesday	Conservatorium of Music opened, 1904.
15	Wednesday	
16	Thursday	
17	Friday	University Sports. No lectures. Meeting of Teachers' Training Committee.
18	Saturday	
19	**SUNDAY**	
20	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
21	Tuesday	
22	Wednesday	
23	Thursday	
24	Friday	
25	Saturday	
26	**SUNDAY**	
27	Monday	Meeting of Governors.
28	Tuesday	
29	Wednesday	
30	Thursday	
31	Friday	Redpath Library opened, 1893.

NOTE.—The University is closed on Thanksgiving Day.

NOVEMBER, 1919

1	Saturday	Meeting of Faculty of Medicine.
2	**SUNDAY**	
3	Monday	Meeting of Faculty of Applied Science.
4	Tuesday	
5	Wednesday	Macdonald College opened, 1907.
6	Thursday	
7	Friday	Meeting of Faculty of Arts.
8	Saturday	
9	**SUNDAY**	
10	Monday	
11	Tuesday	
12	Wednesday	
13	Thursday	Finance Committee.
14	Friday	
15	Saturday	
16	**SUNDAY**	
17	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
18	Tuesday	
19	Wednesday	
20	Thursday	
21	Friday	
22	Saturday	
23	**SUNDAY**	
24	Monday	Meeting of Governors.
25	Tuesday	
26	Wednesday	
27	Thursday	
28	Friday	
29	Saturday	
30	**SUNDAY**	

DECEMBER, 1919.

1	Monday	Meeting of Faculty of Applied Science.
2	Tuesday	
3	Wednesday	Meeting of Academic Board.
4	Thursday	Physics Building Committee.
5	Friday	Meeting of Faculty of Arts.
6	Saturday	Meeting of Faculty of Medicine.
7	**SUNDAY**	
8	Monday	Museum Committee. Library Committee.
9	Tuesday	
10	Wednesday	Regular Meeting of Corporation.
11	Thursday	Finance Committee.
12	Friday	
13	Saturday	
14	**SUNDAY**	
15	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
16	Tuesday	
17	Wednesday	
18	Thursday	
19	Friday	
20	Saturday	Last day of lectures in Arts, Law and Applied Science. Chemistry and Mining Building opened, 1898.
21	**SUNDAY**	
22	Monday	
23	Tuesday	
24	Wednesday	Library closed.
25	Thursday	Christmas Day. Library closed.
26	Friday	
27	Saturday	
28	**SUNDAY**	
29	Monday	Meeting of Governors.
30	Tuesday	
31	Wednesday	

JANUARY, 1920

1	Thursday	Library closed.
2	Friday	Meeting of Faculty of Arts.
3	Saturday	Meeting of Faculty of Medicine.
4	**SUNDAY**	
5	Monday	Lectures resumed in all Faculties. Meeting of Faculty of Applied Science.
6	Tuesday	
7	Wednesday	
8	Thursday	Finance Committee.
9	Friday	
10	Saturday	
11	**SUNDAY**	
12	Monday	
13	Tuesday	
14	Wednesday	First term lectures end in Arts, Law and Applied Science.
15	Thursday	
16	Friday	
17	Saturday	First Term Examinations in Arts, Law and Applied Science begin.
18	**SUNDAY**	
19	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
20	Tuesday	
21	Wednesday	Second Term begins in Arts, Law and Applied Science.
22	Thursday	
23	Friday	
24	Saturday	
25	**SUNDAY**	
26	Monday	Meeting of Governors.
27	Tuesday	
28	Wednesday	
29	Thursday	
30	Friday	
31	Saturday	

FEBRUARY, 1920

1	**SUNDAY**	
2	Monday	Meeting of Faculty of Applied Science.
3	Tuesday	
4	Wednesday	
5	Thursday	Physics Building Committee.
6	Friday	Meeting of Faculty of Arts.
7	Saturday	Meeting of Faculty of Medicine.
8	**SUNDAY**	
9	Monday	Museum Committee. Library Committee.
10	Tuesday	
11	Wednesday	Regular Meeting of Corporation.
12	Thursday	Finance Committee.
13	Friday	
14	Saturday	
15	**SUNDAY**	
16	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
17	Tuesday	
18	Wednesday	Ash Wednesday. No Lectures.
19	Thursday	
20	Friday	
21	Saturday	
22	**SUNDAY**	
23	Monday	Meeting of Governors.
24	Tuesday	Physics and Engineering Buildings opened, 1893.
25	Wednesday	
26	Thursday	
27	Friday	
28	Saturday	
29	**SUNDAY**	

MARCH, 1920

1	Monday	Meeting of Faculty of Applied Science.
2	Tuesday	
3	Wednesday	
4	Thursday	
5	Friday	Meeting of Faculty of Arts.
6	Saturday	Meeting of Faculty of Medicine.
7	**SUNDAY**	
8	Monday	
9	Tuesday	
10	Wednesday	
11	Thursday	Finance Committee.
12	Friday	
13	Saturday	
14	**SUNDAY**	
15	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
16	Tuesday	
17	Wednesday	
18	Thursday	
19	Friday	
20	Saturday	
21	**SUNDAY**	
22	Monday	
23	Tuesday	
24	Wednesday	
25	Thursday	
26	Friday	
27	Saturday	
28	**SUNDAY**	
29	Monday	Meeting of Governors.
30	Tuesday	
31	Wednesday	

APRIL, 1920

1	Thursday	
2	Friday	Good Friday No Lectures. Library closed.
3	Saturday	Meeting of Faculty of Medicine.
4	**SUNDAY**	Easter Sunday.
5	Monday	Macdonald Engineering Building burned, 1907. Meeting of Faculty of Applied Science.
6	Tuesday	
7	Wednesday	
8	Thursday	Finance Committee. Physics Building Committee.
9	Friday	Meeting of Faculty of Arts.
10	Saturday	
11	**SUNDAY**	
12	Monday	Library Committee. Museum Committee.
13	Tuesday	
14	Wednesday	Regular Meeting of Corporation.
15	Thursday	
16	Friday	Second Term Lectures end in Arts, Law and Applied Science. Last day for receiving theses for higher degrees. Medical Building burned, 1907.
17	Saturday	
18	**SUNDAY**	
19	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
20	Tuesday	Sessional Examinations in Arts, Law, and Applied Science begin.
21	Wednesday	
22	Thursday	
23	Friday	
24	Saturday	
25	**SUNDAY**	
26	Monday	Meeting of Governors.
27	Tuesday	New Engineering Building opened, 1909.
28	Wednesday	
29	Thursday	
30	Friday	

MAY, 1920

1	Saturday	Meeting of Faculty of Medicine.
2	**SUNDAY**	
3	Monday	Meeting of Faculty of Applied Science.
4	Tuesday	
5	Wednesday	
6	Thursday	
7	Friday	Meeting of Faculty of Arts.
8	Saturday	
9	**SUNDAY**	
10	Monday	
11	Tuesday	
12	Wednesday	Convocation for Conferring Degrees in Arts, Law and Applied Science.
13	Thursday	Finance Committee.
14	Friday	
15	Saturday	
16	**SUNDAY**	
17	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
18	Tuesday	
19	Wednesday	
20	Thursday	
21	Friday	
22	Saturday	
23	**SUNDAY**	
24	Monday	Victoria Day. Library closed.
25	Tuesday	
26	Wednesday	
27	Thursday	
28	Friday	
29	Saturday	
30	**SUNDAY**	
31	Monday	Meeting of Governors.

JUNE, 1920.

1	Tuesday	
2	Wednesday	
3	Thursday	Physics Building Committee.
4	Friday	
5	Saturday	New Medical Building opened, 1911. Meeting of Faculty of Medicine.
6	**SUNDAY**	
7	Monday	Museum Committee. Library Committee.
8	Tuesday	
9	Wednesday	Regular Meeting of Corporation.
10	Thursday	Finance Committee.
11	Friday	
12	Saturday	
13	**SUNDAY**	
14	Monday	
15	Tuesday	
16	Wednesday	
17	Thursday	
18	Friday	
19	Saturday	
20	**SUNDAY**	
21	Monday	Engineering Building Committee. Chemistry and Mining Building Committee.
22	Tuesday	
23	Wednesday	
24	Thursday	
25	Friday	
26	Saturday	
27	**SUNDAY**	
28	Monday	Meeting of Governors.
29	Tuesday	
30	Wednesday	

JULY, 1920

1	Thursday	Dominion Day. Library closed.
2.	Friday	
3	Saturday	
4	**SUNDAY**	Gift of Frothingham, Molson, and Law Properties by Sir Wm. Macdonald, 1911.
5	Monday	
6	Tuesday	
7	Wednesday	
8	Thursday	
9	Friday	
10	Saturday	
11	**SUNDAY**	
12	Monday	
13	Tuesday	
14	Wednesday	
15	Thursday	
16	Friday	
17	Saturday	
18	**SUNDAY**	
19	Monday	
20	Tuesday	
21	Wednesday	
22	Thursday	
23	Friday	
24	Saturday	
25	**SUNDAY**	
26	Monday	
27	Tuesday	
28	Wednesday	
29	Thursday	
30	Friday	
31	Saturday	

AUGUST, 1920

1	**SUNDAY**	
2	Monday	
3	Tuesday	
4	Wednesday	
5	Thursday	
6	Friday	
7	Saturday	
8	**SUNDAY**	
9	Monday	
10	Tuesday	
11	Wednesday	
12	Thursday	
13	Friday	
14	Saturday	
15	**SUNDAY**	
16	Monday	Peter Redpath Museum opened, 1882.
17	Tuesday	
18	Wednesday	
19	Thursday	
20	Friday	
21	Saturday	
22	**SUNDAY**	
23	Monday	
24	Tuesday	
25	Wednesday	
26	Thursday	
27	Friday	
28	Saturday	
29	**SUNDAY**	
30	Monday	
31	Tuesday	

McGill University.

HISTORY AND CONSTITUTION.

FOUNDATION AND EARLY HISTORY.

McGill University owes its origin to a private endowment. It was founded by the Hon. James McGill, a leading merchant and public-spirited citizen of Montreal, who died in 1813. By his will, dated January 8th, 1811, he bequeathed his property of Burnside (consisting of 46 acres of land with the dwelling house and other buildings thereon) and a sum of £10,000 in money to found a college in a provincial university, the erection of which had already been provided for by the British Government. The four trusteees appointed under his will were directed to convey the property of the bequest to the Royal Institution for the Advancement of Learning, a body which, in 1802, had been incorporated by the Legislature "for the establishment of free schools and the advancement of learning" in the Province of Quebec. The conditions upon which the property was to be transferred to the Royal Institution for the Advancement of Learning were, mainly, that that Institution should, within ten years after the testator's decease, erect and establish on his Burnside estate "a University or College, for the purposes of education and the advancement of learning in this Province," and that the college, or one of the colleges in the University, if established, should "be named and perpetually be known and distinguished by the appellation of McGill College." Owing to persistent opposition by the leaders of one section of the people to any system of governmental education and to the refusal by the Legislature to make the grants of land and money which had been promised, the proposed establishment of the provincial university by the British Government was abandoned.

In so far as the McGill College was concerned, however, the Royal Institution at once took action by applying for a Royal Charter. Such a charter was granted in 1821, and the Royal Institution prepared to take possession of the estate, but, owing to protracted litigation, this was not surrendered to them till 1829, when the work of teaching was begun in two faculties, Arts and Medicine. The record of the first thirty years of the University's existence is an unbroken tale of financial embarrassment and administrative difficulties. The charter was cumbrous and unwieldy, and unsuited to a small college in the circumstances of this country, and the University, with the exception of its medical faculty, became almost extinct. But after thirty years the citizens of Montreal awoke to the value

of the institution which was struggling in their midst. Several gentlemen undertook the responsiblity of its reorganization, and, in 1852, an amended charter was secured. The Governor-General of Canada for the time being, Sir Edmund Head, became interested in its fortunes, and in 1855, with the advent of a new Principal, an era of progress and prosperity began.

A course in Law was begun in connection with the Faculty of Arts, in 1848, and the department was established as a separate faculty in 1853. The Faculty of Applied Science was not regularly organized till 1878, but a course in Engineering, which was amplified into the Department of Practical Science in 1871, was given under the Faculty of Arts as far back as 1856. The Faculty of Agriculture was established in 1907.

Principal Dates in the History of the University.

First Charter obtained—1821.
College opened.—1829.
Amended Charter secured.—1852.
William Molson Hall opened.—October 10th, 1862.
Peter Redpath Museum opened.—August 16th, 1882.
Physics and Engineering Buildings opened.—February 24th, 1893.
Redpath Library opened.—October 31st, 1893.
Chemistry and Mining Building opened.—December 20th, 1898.
Royal Victoria College opened.—September 4th, 1899.
Strathcona Medical Buildings opened.—September 18th, 1901.
Conservatorium of Music opened.—October 14th, 1904.
Macdonald Engineering Building burned.—April 5th, 1907.
Medical Building burned.—April 16th, 1907.
Macdonald College opened.—November 5th, 1907.
New Engineering Building opened.—April 27th, 1909.
New Medical Building opened.—June 5th, 1911.

Gift of Frothingham, Molson, and Law properties (comprising about 25 acres), from Sir William C. Macdonald.—July 4th, 1911.

One million five hundred thousand dollars raised (chiefly from Montreal citizens) in aid of the funds of the University.—November 20-24, 1911.

Gift of $1,000,000 from the Carnegie Corporation, New York, "in recognition of the noble and devoted service and sacrifice of McGill towards Canada's part in the Great War."—February 25th, 1918.

GOVERNMENT OF THE UNIVERSITY.

By the amended Charter "the Governors, Principal, and Fellows" of the University are constituted a body politic and corporate, with all the usual rights and privileges of corporate bodies. The supreme authority, however, is vested in the Crown, and is exercised by His Excellency the Governor-General of Canada, for the time being, as **Visitor.** This is a special and important feature of the constitution, for, while it gives the University an imperial character and removes it at once from any merely

local or party influence, it secures the patronage of the head of the political system of the country.

The **Governors** of the University are the members of the Royal Institution for the Advancement of Learning, above mentioned. and in them, are vested the management of finances, the passing of University statutes and ordinances, the appointment of professors, and other important duties. Their number is limited to twenty-five, and vacancies are filled by the nomination of the remaining members with the approval of the Visitor. The President of the Board of Governors is *ex-officio* Chancellor of the University.

The **Principal** is the academic head and chief administrative officer. He is appointed by the Board of Governors (of which body he is a member *ex-officio*). He also holds the office of Vice-Chancellor of the University.

The **Fellows** (42 in number) are selected with reference to the representation of all the faculties and departments of the University, and of the graduates, affiliated colleges, and other bodies.

The Governors, Principal and Fellows together, constitute the **Corporation,** the highest academical body. Its powers are fixed by statute, and include the framing of all regulations touching courses of study, matriculation, graduation, discipline and the granting of degrees.

The administration of these regulations, along with direct responsibility for the conduct of the educational work of the University, is entrusted to the several **Faculties,**—Arts, Medicine, Law, Applied Science, and Agriculture.

The Principal, the Deans of the several Faculties, the Professors and Associate Professors, and other members, not exceeding ten in number, of the teaching staff, constitute the **Academic Board** of the University, with the duty of considering such matters as pertain to the interests of the University as a whole, and of making recommendations concerning the same.

INCORPORATED AND AFFILIATED COLLEGES.

INCORPORATED COLLEGES.

Macdonald College is situated at Ste. Anne de Bellevue, about twenty miles from Montreal. It consists of three departments:—The School of Agriculture, the School of Household Science, and the School for Teachers. Courses leading to the Bachelor's and Master's degrees in agriculture are under the control of the Corporation of McGill University; all the short term courses in agriculture, as well as the courses in domestic science, are under the direction of the Macdonald College Committee: and those for diplomas to teach in the Province of Quebec are subject to the immediate supervision of the Teachers' Training Committee. Further information is given on page 289, and full details as to the college buildings, courses, terms of admission, fees, etc., will be found in the Macdonald College Announcement, which will be sent on application to the Principal, Macdonald College, Que.

The Royal Victoria College is the women's College of McGill University for courses in the Faculty of Arts. For further particulars, see page 283.

AFFILIATED COLLEGES.

Acadia, Alberta and Mount Allison Universities and the University of St. Francis Xavier's College are affiliated to McGill University to the extent that students who have completed the two-year course in Engineering given by these universities are admitted directly to the third year in the courses of Civil Engineering, Mining Engineering, Metallurgical Engineering, Chemical Engineering, Mechanical Engineering, and Electrical Engineering of the Faculty of Applied Science of this University.

Students from these universities entering the third year in either of the first two of these courses must take the summer school in surveying, which opens in 1919 on September 1st; those entering the third year in Metallurgical Engineering or Chemical Engineering will take the summer course in Chemistry.

Students from these universities entering the courses in Mechanical or Electrical Engineering are advised to take the summer school in mechanical drawing, physics and shopwork, which opens on September 1st, but they are not required to do so.

Alberta University is also affiliated in the Faculty of Medicine, students who have completed the third year in the Medical course there being admitted directly to the fourth year in the Faculty of Medicine of this University.

Royal Military College.—Graduates of the Royal Military College of Kingston are admitted to the third year in the several departments of the

Faculty of Applied Science above mentioned. They must in all cases take the respective summer schools pertaining to these several courses, which summer schools open in 1919 on September 2nd.

Arrangements have also been made whereby graduates and students of the Mechancial Science course in the University of Cambridge will be admitted to advanced standing in the Faculty of Applied Science under definite regulations, particulars of which can be obtained from the Dean of the Faculty.

AFFILIATED THEOLOGICAL COLLEGES.

The Theological Colleges named below are affiliated to the University under the following arrangements:—Students in these institutions who are pursuing a double course in Arts and Theology (six years at least) will be exempted from a half course in Arts in each of the third and fourth years or a whole course in either.

The Congregational College of Canada, Montreal—Acting Principal, Rev. W. H. Warriner, M.A., D.D., 58 McTavish St.

The Diocesan College of Montreal.—Principal, Rev. E. I. Rexford, M.A., LL.D., 743 University St.

The Presbyterian College, Montreal, in connection with the Presbyterian Church in Canada.—Principal, Rev. D. J. Fraser, M.A., LL.D., D.D., 69 McTavish St.

The Wesleyan College of Montreal.—Principal, Rev. James Smyth, LL.D., 760 University St.

A movement was inaugurated in the session 1912-13 for a large measure of co-operation among the above Colleges, with the result that a considerable portion of the work which has hitherto been done separately is now taken in joint classes.

For Calendars and all necessary information, apply to the Principals of the several Colleges.

AFFILIATION TO OTHER UNIVERSITIES.

The University is affiliated to the universities of Oxford, Cambridge and Dublin, under conditions which allow an under-graduate who has taken two years' work, and has passed the second year sessional examination in Arts, to pursue his studies and take his degree at any of these universities on a reduced period of residence.

FACULTIES AND COURSES.

The educational work of the University is carried on in McGill College, the Royal Victoria College for Women, and other University buildings in Montreal; and also in Macdonald College at Ste Anne de Bellevue.

COURSES FOR DEGREES AND DIPLOMAS.

The several courses offered by the University are as follows:—

In the Faculty of Arts.

For the degree of Bachelor of Arts.
" " " " Bachelor of Science.
" " " " Bachelor of Commerce.

The undergraduate courses of study which lead to the degree of B.A. or of B.Sc., extend over four sessions of about seven and a half months each. In the second, third and fourth years extensive options are provided, and certain exemptions are also allowed to professional students. (See pages 110 to 112)

The course for the degree of Bachelor of Commerce extends over three years. Full particulars are given on pages 147 to 159.

The following courses are also offered, one leading to the degree of Bachelor of Science in Agriculture, with the privilege of qualifying for an Academy Diploma; another to the degree of Bachelor of Household Science, and a third to the degree of Bachelor of Laws. The first two years are taken in the Faculty of Arts and the last two in the Faculty of Agriculture, or the School of Household Science, or the Faculty of Law, as the case may be. Details of the first two courses will be found in the Macdonald College Announcement, and of the last under "Faculty of Law," page 241.

The undergraduate course in Arts can be taken along with the undergraduate course in Medicine, in eight years, or with that in Applied Science, in six years. (See pp. 111 and 110.)

The courses in Arts are open to women (who are educated mainly in separate classes) on equal terms with men. Residential accommodation for women students is provided in the Royal Victoria College. (For further particulars, see page 283.)

Holders of the degree of B.A. from this University are admitted to the study of the learned professions, without preliminary examination, in the different provinces of Canada, and in Great Britain and Ireland, and elsewhere. They will also be granted Academy Diplomas to teach in the Province of Quebec, provided they have passed an examination in pedagogy and have taught, under supervision, for the time required by law.

In the Faculty of Applied Science.

For the degree of Bachelor of Architecture (B. Arch.).

For the degree of Bachelor of Science (B.Sc.), in the departments of Chemistry, Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, Metallurgy, Metallurgical Engineering, and Mining Engineering.

The undergraduate courses of study for the degree of B.Sc. extend over four sessions, averaging (with summer sessions) about eight months each, and provide a thorough professional training in the departments mentioned above. The course for the degree of B. Arch. extends over five years. Full particulars are given on pages 195 to 200.

The undergraduate course in Arts can be taken along with the undergraduate course in Applied Science, in six years. (See page 110.)

In the Faculty of Law.

For the degree of Bachelor of Civil Law (B.C.L.)
" " " " Bachelor of Laws (LL.B.)

The undergraduate course for each of these degrees extends over four sessions of eight months each, except for graduates in Arts, Applied Science or Medicine, who can obtain the former (B.C.L.) in three years and the latter (LL.B.) in two. The degree of B. C. L. can also be obtained in three years by (1) ex-soldiers and sailors, and (2) those who are taking the B course for the degree, recently instituted for persons who do not intend to practise in the Province of Quebec.

Candidates for the degree of LL. B., who are not graduates as above specified, will take the first two years in the Faculty of Arts and the last two in Law. (Full particulars are given on page 242.)

In the Faculty of Medicine.

For the degree of Doctor of Medicine and Master of Surgery (M.D., C.M.).

For the degree of Doctor of Dental Surgery (D.D.S.).
For the Diploma of Public Health.
For the Diploma of Pharmacy.

The undergraduate course of study leading to the degree of M.D., C.M., extends over six sessions of eight months each, and that leading to the degree of Doctor of Dental Surgery covers four sessions of the same length. For further information, see pages 256 to 265.

The undergraduate course in Arts can be taken along with the undergraduate course in Medicine in eight years. (See page 111.)

The course in Public Health and Sanitary Science is open to those only who have graduated in Medicine, or who possess some other qualification for practice. Generally speaking, it occupies a period of eight months.

In the Graduate School.

For the degrees of Master of Arts, Master of Science, Master of Laws, and Doctor of Philosophy.

Full information as to admission and departments in which studies are offered will be found on page 275, and can also be obtained from the Chairman or Secretary of the Committee on Graduate Studies, to which Committee are also submitted all applications for the degrees of D.Sc., D. Litt. and D.C.L. The Chairman of the Committee is Professor James Harkness.

In Macdonald College.

For the degree of Bachelor of Science in Agriculture (two courses.)
Other courses in the School of Agriculture.
For the degree of Bachelor of Household Science (two years in Arts, and two in the School of Household Science.)
Other courses in the School of Household Science.
The several courses for teachers' diplomas.

The course of study for the degree of Bachelor of Science in Agriculture extends over four sessions of about eight months each. It aims to provide a thorough theoretical and practical training in the several branches of the science. (See also page 289.)

The Macdonald College announcement, containing full details as to buildings, courses, terms of admission, fees, etc., can be obtained from the Principal, Macdonald College P. O., Que.

In the Conservatorium of Music.

For the degrees of Bachelor of Music (Mus. Bac.) and Doctor of Music (Mus. Doc.).

For the Diploma of Licentiate in Music, and the several Grade examination certificates.

Students are admitted as *Regular Students* taking an organized course leading to the Diploma of Licentiate in Music or the degree of Bachelor of Music (See page 266), or as *Partial Students*, who under certain conditions and after examination, can obtain certificates bearing the imprimatur of the University. Full details can be obtained on application to the Secretary of the McGill Conservatorium of Music, 323 Sherbrooke street west, Montreal.

The Course for the First Class Academy Diploma of the Province of Quebec.

Certain courses are given by the Department of Education, which when supplemented by practice teaching and observation (except in the

case of holders of the Model Diploma) lead to a First Class Academy Diploma on graduation. (See page 146.)

This diploma can also be obtained by those who qualify for the degree of B.S.A. by taking two years in Arts, followed by two in the Faculty of Agriculture. (See Macdonald College announcement.)

Extension Courses.

Evening lectures on a variety of subjects. Particulars will be found on pages 159 to 163.

DEGREES.

The degrees conferred by the University are as follows:—B.A; B.Sc.; B. Arch.; B.C.L.; LL.B.; B.S.A.; Mus. Bac.; B. Com.; M.D., C.M.; D.D.S.; M.A.; M.Sc.; LL.M.; Mus. Doc.; D.C.L.; Ph.D.; D.Sc.; D.Litt.; and LL.D. (Honorary).

I. LOWER DEGREES.

In order to obtain the degrees of B.A.;B.Sc.; B. Arch.; B.C.L.; LL.B.; B.S.A.; B.Com.; B.H.S.; M.D., C.M.; and D.D.S., students are required to attend lectures (for length of courses, see pages 36 to 38), to complete the course of study for the degree sought, to pass all the prescribed examinations during the course, and any special examination for graduation, and to perform such other exercises as may be prescribed to that end.

The requirements for degrees in Music are stated on page 267.

II. HIGHER DEGREES.

All theses for higher degrees, in order to be accepted, must be sent to the Chairman of the Committee on Graduate Studies before April 16th, 1920. The examination will be held in April. No thesis will be received, or examination granted, until the fee for the degree has been paid.

Degree of M.A.

For requirements, see under "Graduate School," page 275.

Degree of M.Sc.

For requirements, see under "Graduate School," page 277.

Degree of LL.M. (Master of Laws).

For requirements, see under "Graduate School," page 277.

Degree of D.Litt.

Candidates for the degree of Doctor of Literature must be Masters of Arts, and graduates of at least five years' standing, who shall have distinguished themselves by special research and learning in the domain of literature or philosophy. They are required to present a satisfactory thesis or published work.

Degree of D.Sc.

Candidates for the degree of Doctor of Science must be Masters of Arts, or Masters of Science, or Doctors of Medicine, and graduates of at least five years' standing, who shall have distinguished themselves by special research and learning in the domain of science. They are required to present a satisfactory thesis or published work.

Degree of Ph.D.

For requirements, see under "Graduate School," page 278.

Degree of D.C.L. (Doctor of Civil Law).

For requirements, see under "Graduate School," page 279.

Degree of LL.D.

The degree of Doctor of Laws is given only as an honorary degree.

III. ADMISSION "AD EUNDEM GRADUM."

The following are the regulations applicable to admission *ad eundem gradum*:—

Extract from the Statutes, Chap. VIII.

"Graduates of other universities desirous of admission to the like "degree in this University, may be so admitted by the Corporation; due "enquiry being first made as to their moral character and sound learning, "and opportunity given to the several Faculties, or the Committee on "Graduate Studies, as may be required, to make such representation in the "premises as they may see fit. Provided always that, except in the case "of candidates proceeding to a higher degree, such applica tion for ad- "mission shall not be put to vote until after three months' notice unless "by unanimous consent, and shall not be ordered, if as many as five mem- "bers of the Corporation shall vote against it."

Extracts from the Regulations of the Corporation.

"In all cases in which anyone is proposed for an *ad eundem* degree, "it shall be necessary for the member or members of the Corporation making "such proposal, to state in writing therewith the grounds upon which the "granting of such degree is advocated, and when the case shall be referred "to the Faculties, under Chap. VIII. of the Statutes, copies of such proposal "and grounds shall be transmitted to the Faculties by the Registrar for "their consideration."

Note. In considering applications under the above regulations, the Faculties will require as "grounds" the pursuit of a course of study or research

in this University; association with the academic work of the University; or similar qualifications.

Admission "ad eundem gradum" is not granted merely as a titular distinction.

"The degree of Bachelor of Arts or Bachelor of Science, *ad eundem*, "shall be granted only to candidates who are proceeding to a higher "degree, the lower degree being granted only when the candidate has "qualified for the higher."

"Graduates of other universities desiring an *ad eundem* degree of "this University, as a condition of entering on a course of study leading "to a higher degree, shall make application to the Committee on Graduate "Studies, who shall immediately take action without previous reference to "the various Faculties or to Corporation."

ENTRANCE REQUIREMENTS.

JUNIOR MATRICULATION.

I. REGULATIONS.

1. Matriculation examinations (for entrance into all Faculties) are held only in June and September—in June at McGill College and at the local centres named below; in September, at McGill College, and at the following centres if a sufficient number apply:—Calgary, Regina, Winnipeg, Toronto, St. John and Truro.

ALL INQUIRIES RELATING TO THE EXAMINATIONS SHOULD BE ADDRESSED TO THE REGISTRAR OF THE UNIVERSITY.

For the convenience of candidates in Great Britain, who are not otherwise qualified for entrance, an examination will be held regularly in London, Eng., each year, commencing on or about the 12th of June. Full information regarding the exact date of the examination, fee, etc., may be obtained from the Honorary Representative of the University, W. A. Bulkeley-Evans, Esq., M.A., Secretary Headmasters' Conference 12 King's Bench Walk, Temple, London, E.C.

2. Every candidate for examination is required to fill up an application form and return the same with the necessary fee (for which see page 46) one month before the examination begins. Blank forms may be obtained from the Registrar.

No application for examination in June will be received after May 20th.

3. Examinations will be held in June at the following centres, outside of the Province of Quebec, if a sufficient number of candidates apply:—Sydney, N.S.; Rothesay, N.B.; Ottawa, Ont.; Brockville, Ont.; Port Hope, Ont.; Toronto, Ont.; Hamilton, Ont.; St. Catharines, Ont.; Winnipeg, Man.; Regina, Sask,; Calgary, Alta.; Kingston, Jamaica, and London, Eng.

Candidates who are not within easy reach of any of the above centres are advised to prepare for entrance by taking an examination recognized by the Universty, as shown on pages 45 and 46.

4. The matriculation examination may be taken in two parts, but in order to be valid for entrance it must be completed within two years from the date of the first attempt. Credit will not be given for less than

four papers passed at one time,* except in the case of those who are not required to take as many as four papers to complete the examination; nor will credit be given for less than four papers on certificates which may be presented for exemption from the examination, and no certificate will be accepted which has been obtained under easier conditions than those which are imposed on candidates who are attempting to qualify for entrance by taking the regular University examination.

5. Candidates will not be considered as having passed in any subject unless they obtain at least 50 per cent. of the maximum marks in that subject (in subjects in which two papers are set, 50 per cent. on the two and not less than 40 in either, and this only when the two papers are taken at the same examination).

This regulation applies also in the case of certificates.

Certain modifications have been made in Regulations 4 and 5 for the benefit of ex-soldiers and sailors. Particulars can be obtained from the Registrar.

6. Candidates for admission to the Faculties of Arts, Applied Science, Law, Agriculture and the Department of Music who have failed to complete the matriculation requirements will be allowed to enter the first year as conditioned undergraduates, provided (a) that they have not failed in more than two papers (which cannot both be in the mathematical section nor in two languages) and (b) that they have obtained at least 25 per cent. in the subjects in which they have failed and 50 per cent of the aggregate.†

This regulation applies also to candidates who seek to satisfy the matriculation requirements by means of certificates granted by other recognized examining bodies.

This condition must be removed before the student can be admitted to the second year.

In order to be admitted to the Faculty of Medicine, a candidate must pass in every subject required.

Students who are conditioned in a language must attend a special tutorial class during their first session, for which a fee of $10.00 is exigible. Any student so conditioned who fails to attend this class with regularity will not be allowed to present himself for examination.

7. Matriculation certificates will be issued to candidates who have passed the entrance examination conducted by the University, but not to those who have qualified by means of certificates, except when the greater

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*For the purpose of this regulation the June and September examinations of the same year will be considered as "one time."

†See, however, for French, page 99.

part of the requirements has been satisfied by passing the University examination.

8. The certificates and diplomas named below will, if submitted to the Registrar, be accepted *pro tanto* in lieu of the junior matriculation examination, *i.e*, in so far as the subjects and standard of the examination taken to obtain them are, to the satisfaction of the Matriculation Board, equivalent to those required for the matriculation examination of this University. Candidates offering certificates which are not a full equivalent will be required to pass the matriculation examination at the regular time set therefor (June or September), in such of the necessary subjects as are not covered thereby.

Intending students who wish to enter by certificates should under no circumstances come to the University without having first obtained from the Registrar a statement of the value of the certificates they hold, as many of these lack one or more essential subjects, or the work done in a subject may not be adequate, or again, the percentage gained may not be sufficiently high (see regulation 5). Morever, it must be remembered that a certificate may admit to one Faculty and not to another. When a diploma or certificate does not show the marks obtained in the several subjects of the examination, it must be accompanied by an official statement containing this information.

Province of Quebec.

The University School Leaving Certificate.
The Model School Diploma.

Province of Ontario.

Certificates of admission to the Normal School.
Junior Matriculation Certificates.

Province of New Brunswick.

First Class, Superior and Grammar School Licenses.
Grade XI and XII Certificates.

Province of Nova Scotia.

The Leaving Certificate of Grade XI.

Province of Prince Edward Island.

First Class Teachers' Licenses.
Second Year Certificates of Prince of Wales College.

Province of British Columbia.

Intermediate Grade Certificates.

Province of Manitoba.

Second Class Teachers' Certificates.

Provinces of Alberta and Saskatchewan.

The Departmental Certificate of Standard XI

Newfoundland.

Associate Grade Certificates.

United States.

Certificates granted by the College Entrance Examination Board and by the New York State Board of Regents.

Great Britain.

The holder of a Higher Certificate or a School Certificate of the Oxford and Cambridge Schools Examination Board, of the Senior Certificate of the Oxford or Cambridge Board of Examiners, of a First Class Certificate of the College of Preceptors or of a Higher Examination Certificate of the Scotch and Welsh Educational Departments is entitled to exemption from the matriculation examination, *pro tanto*, if the candidate has at one and the same examination passed in certain specified subjects.

Applications for exemption from the matriculation examination based upon certificates of having passed examinations other than those above mentioned, will be considered as occasion may require. Every such application must be accompanied by certificates and full particulars, and should be addressed to the Registrar.

II. MATRICULATION EXAMINATION FEES.

For an examination in six or more papers	$7.00
(For examination at a local centre where not more than four candidates are writing the fee will be determined by the Registrar.)	
For an examination in from three to five papers	4.00
For an examination in one or two papers	2.00
For examination of certificates, in respect of which candidates are exempted from the whole of the matriculation examination	2.00

Matriculation examination fees must be sent to the University Registrar at the time of application for the examination. No application will be accepted unless accompanied by the regular fee.

Certificates will be issued to successful candidates without additional fee.

III. SUBJECTS OF EXAMINATION.

Faculty of Arts.

For candidates intending to take the B.A. course.

1. **English** (two papers).
2. **History** (one paper).
3. **Latin** *or* **Greek** (two papers).
4. One of the following (two papers in each):
   Greek *or* **Latin** (the one not already chosen).
   French, German.
5. **Elementary Mathematics** [**Algebra** (one paper) and **Geometry** (one paper).]
6. One of the following:
   Botany, Chemistry, Physics (one paper); a **Language** not already chosen (two papers).

For candidates intending to take the B.Sc. course in Arts, or the course leading to the degree of Bachelor of Science in Agriculture (two years in Arts and two in Agriculture).

1. **English** (two papers).
2. **History** (one paper).
3. **Elementary Mathematics** [**Algebra** (one paper) and **Geometry** (one paper).]
4. **French** (two papers).
5. **Latin** or **German** (two papers) or **Physics** (one paper).
6. One of the following:
   Botany, Chemistry, Physics—if not already chosen (one paper);
   Latin, if not already chosen (two papers); **Greek** (two papers).

Candidates who intend ultimately to proceed to the study of medicine are reminded that for medical registration it is necessary to take Latin.

For candidates entering on the course for the Degree of Bachelor of Commerce.

One of the following examinations:—

(1) The ordinary matriculation examination for the B.A., or the B.Sc. Course.

(2) An examination on the following subjects:—

1. **English** (two papers).
2. **History** (one paper).
3. **French,** including oral examination (two papers).
4. **Elementary Mathematics** [**Algebra** (one paper), and **Geometry** (one paper).]
5. One of the following, viz:
   Botany, Chemistry, Physics (one paper).

Holders of Model Diplomas who are certified by the Dean of the School for Teachers of Macdonald College to have taken 75 per cent. of the total marks at their final examinations, with not less than 50 per cent. of the marks in (1) mathematics, (2) French, and (3) Latin or Greek, respectively, will be admitted without further examination as undergraduates of the first year in Arts.

Faculty of Applied Science.

(For all courses leading to the Degree of B.Sc. in the different branches of Engineering.)

1. **English** (two papers).
2. **History** (one paper).
3. One of the following:
   French, German, Latin Greek (two papers).
4. **Elementary Mathematics** [**Algebra** (one paper), and **Geometry** (one paper).]
5. **Advanced Mathematics** [**Algebra** (one paper) and **Geometry** and **Trigonometry** (one paper).]
6. One of the following:
   Botany, Chemistry, Physics (one paper), a **Language** not already chosen (two papers).

(For the course leading to the Degree of B. Arch.)

1. **English** (two papers).
2. **History** (one paper).
3. **French** (two papers).
4. **Elementary Mathematics** [**Algebra** (one paper), and **Geometry** (one paper).]
5. **Advanced Mathematics** [**Algebra** (one paper), and **Geometry** and **Trigonometry** (one paper).]
6. One of the following:
   Greek, Latin, German (two papers), **Chemistry, Physics** (one paper).
7. **Freehand and Geometrical Drawing.**

In the case of No 7, applicants may send specimens of their work to the Head of the Department or take an examination at the time of the regular matriculation examination in September. No examinations taken elsewhere are accepted as equivalents for this subject.

No student will be admitted to the Department of Architecture as an undergraduate, until he has satisfied the matriculation requirements in drawing.

Faculty of Medicine and Department of Dentistry.

1. **English** (two papers).
2. **History** (one paper).
3. **Latin** (two papers).
4. **Elementary Mathematics** [**Algebra** (one paper), and **Geometry** (one paper).]
5. **Chemistry** (one paper).
6. **Physics** (one paper).
7. One of the following:
   Greek, French, German (two papers.)

In addition to the certificates mentioned on pages 45 and 46, the following are accepted *pro tanto* in lieu of the matriculation examination in this Faculty:

The degree of Bachelor of Arts obtained from any recognized university.

A certificate of having passed the examination of a Provincial Medical Council.

In the case of candidates from the United States, a certificate of having passed a State or University examination.

No candidate will be admitted to the Faculty of Medicine without having satisfied all the matriculation examination requirements.

Those who intend to practise medicine in any of the Provinces of Canada will obtain information regarding registration and admission to study by corresponding with the Registrars of the several Provincial Medical Councils. (For names, see page 257).

The requirements for the admission of women to the Faculty of Medicine are as follows:—

(1). B.A. degree from a recognized university, or (2) completion of the first two years in the Faculty of Arts of McGill University.

Faculty of Law.

1. **English** (two papers).
2. **History** (one paper).
3. **Latin** (two papers).
4. **French** (two papers).
5. **Elementary Mathematics** [**Algebra** (one paper), and **Geometry** (one paper).]
6. One of the following:
   Botany, Chemistry, Physics (one paper), **Greek, German** (two papers).

In addition to those who qualify on the certificates mentioned on pages 45 and 46 Bachelors of Arts, Science, or Letters of any Canadian or British University are admitted without examination.

Candidates who intend to practise law or to be admitted to the notarial profession in the Province of Quebec are referred to the statutory requirements as shown on page 251. If they are not graduates they should pass the examination for admission to study required by the Council of the Bar or by the Board of Notaries, as the case may be, before seeking to enter. In that case they will be admitted without examination.

Faculty of Agriculture.

(For the course leading to the Degree of B.S.A.)

1. **English** (two papers).
2. **History** (one paper).
3. **Latin** *or* **French** or **German** (two papers).
4. **Elementary Mathematics** [**Algebra** (one paper), and **Geometry** (one paper).]
5. **Nature Study** and **Elementary Agriculture.**
6. Any one of the following:
   Botany, Chemistry, Physics, Zoology (one paper).

A matriculation certificate for entrance to any other Faculty of the University will also be accepted, but in addition the candidate will be required to pass in nature study and elementary agriculture.

For the next two or three years, however, candidates for the degree will be allowed to proceed on satisfying the following conditions:—

(1) Pass before entrance in English grammar, history and geography, arithmetic, English composition, nature study and elementary agriculture.

(2) Obtain 60 per cent. of the marks in English and 50 per cent. in general proficiency in an examination on the work of the Two-Year Course,and be granted the permission of the Faculty to continue.

Department of Music.

(For the course leading to the Degree of Bachelor of Music.)

1. **English** (two papers).
2. **History** (one paper).
3. **French** *or* **German** (two papers).
4. **Latin** *or* **Italian** (two papers)
5. **Arithmetic** *or* **Algebra** *or* **Geometry** (one paper).
6. **Rudiments of Music** musical intervals, scales clefs, time signatures, construction of chords, elementary harmony to chord of dominant seventh (one paper).

IV. REQUIREMENTS IN EACH SUBJECT.

English Grammar.*

Main facts in connection with the history of the language; etymology and syntax. A good knowledge of parsing and analysis is essential. West's English Grammar for Beginners, or Lang's Advanced Grammar (Copp, Clark Co.) is recommended as a text-book.

One examination paper of two hours.

Arithmetic.*

All the ordinary rules, including square root, and a knowledge of the metric system.

One examination paper of two hours.

Nature Study and Elementary Agriculture.*

Hatch and Haselwood's Elementary Agriculture (The Educational Book Co., Ltd., Toronto), is recommended as a text-book.

History and Historical Geography.

The Groundwork of British History, editors Warner and Marten (Blackie & Sons, Edinburgh), Sec. III, from 1714 to 1911; Canadian History (Grant), 1763 to date.

For candidates outside of Canada an option will be allowed in this subject on British History from 1485 to 1911, same text-book as is prescribed above, Secs. II and III.

The geography required will be that relating to the history prescribed.

An option will be allowed on the Ontario requirements in this subject.

One examination paper of two hours.

English.

A. *Composition.* As in the Ontario High School Composition (Copp, Clark Co.) with a short essay on a general subject and two or three others based on the works prescribed for reading, as follows:—George Eliot, Silas Marner (The Macmillan Co. of Canada); Shakespeare, The Tempest (The Macmillan Co. of Canada); Browning's Shorter Poems (The Macmillan Co. of Canada).

These books should be read carefully, but the student's attention should not be so fixed upon details that he fails to appreciate the main purpose and beauty of the works.

Frequent practice in composition is essential.

B. *Literature* (for critical study).—Shakespeare, Julius Cæsar; Selections from Tennyson, as in the Laureate Poetry Books, No. 8 (E. Arnold, London; agents, Copp, Clark Co., Toronto); Coleridge, Selected Poems (The Macmillan Co. of Canada).

Candidates will be expected to have memorized some of the finest passages.

* For candidates intending to enter the Faculty of Agriculture.

Two examination papers of two hours each, one on Composition and the other on Literature (for critical study).

An alternative paper will be set on the work specified in English for the Junior Matriculation Examination of the Province of Ontario.

Spelling will be tested by the candidates' papers in English. Examiners in other subjects will also take note of mis-spelled words and will report flagrant cases to the Board.

Greek.

Texts:—Philpotts and Jerram, Easy Selections from Xenophon, chaps. 3, 4, 5; Homer, Iliad I, lines 1 to 350.

Grammar.—Knowledge of grammar will be tested by translation and by grammatical questions based on the specified texts.

Translation at Sight from Greek into English.

Two papers of two hours each will be set; one on Xenophon, with questions in grammar, and translation of easy English prose sentences into Greek; the other on Homer, with questions in grammar, and translation at sight.

Alternative questions will be set on the work prescribed in Greek for the Junior Matriculation Examination of the Province of Ontario, if this differs from that specified above.

At the September examination other texts equivalent to those specified may be accepted, if application be made to the Registrar at least one month before the date of the examination.

Latin.

Texts.—(A) Ceasar, De Bello Gallico, Books II and III; and (B) *Either* Ovid, Stories from the Metamorphoses (as in Gleason's "A Term of Ovid," (American Book Company), lines 1 to 670, *or* Virgil, Aeneid II (Wainwright, Bell's Illustrated Classics), verses 1 to 505.

In 1921 the option on Ovid will not be given.

Grammar.—Knowledge of grammar will be tested by translation and composition, and by grammatical questions based on the specified texts.

Translation at Sight from Latin into English.

Composition.—Translation into Latin of detached English sentences and easy narrative based on the prescribed texts.

Two papers of two hours each will be set; one on translation at sight, Virgil or Ovid, and accidence; the other on Cæsar, syntax and translation of English into Latin.

Note.—The "Roman" method of prouncing Latin is recommended.

An alternative paper will be set on the Latin texts prescribed for the Junior Matriculation Examination of the Province of Ontario, if these differ from those specified above.

At the September examination other texts in Latin equivalent to those specified may be accepted, if application be made to the Registrar at least a month before the day of the examination.

French.

Grammar.—A thorough knowledge of French accidence and of those points of syntax which are of more frequent occurrence in an ordinary easy style.

Translation at Sight into English of a French passage of moderate difficulty.

Translation at Sight into French of detached English sentences and an easy English passage. Material for such translation is selected with a view to testing the candidate's general knowledge of French grammar.

Books recommended:—Fraser and Squair's French Grammar or Bertenshaw's French Grammar (Longmans), and Cameron's Elements of French Prose Composition (Holt & Co.).

A list of French texts suitable for class reading can be obtained by applying to the Registrar.

Two papers will be set, of two hours each, one on grammar, including translation of short English sentences into French, and one on translation of continous passages from French into English and from English into French.

German.

Grammar.—A thorough knowledge of German accidence and syntax, as in Van der Smissen, or any other German grammar of equally good standing.

Translation at Sight into English of a German passage of moderate difficulty.

Translation into German of detached English sentences and of an easy English passage. Material for such translation is selected with a view to exemplifying the points of grammar included within the above limits.

Texts:—(Translation and grammatical study):—

Gluck auf (Ginn & Co.), to be read first then Fritz auf Ferien (Copp, Clark Co.).

Texts for 1922 .—

Gerber, Märchen und Erzaplungen (Heath), omitting Nos. 3, 4, 10, 14 and Poems; Baumbach, Das Habichtsfräulein (Heath).

The Ontario Junior Matriculation requirements in German will be accepted in place of the texts specified above.

At the September examination other texts equivalent to those specified may be accepted, if application be made to the Registrar at least one month before the date of the examination.

Two papers will be set, of two hours each, one on prescribed texts and grammar, including translation of short English sentences into German, and one on translation of continuous passages from German into English and from English into German.

Elementary Mathematics.

Algebra.—Elementary rules, involution, evolution, fractions, indices, surds, simple and quadratic equations of one or more unknown quantities; as in Hall and Knight's Elementary Algebra, to the end of surds (omitting portions marked with an asterisk), or as in similar text-books.

One examination paper of two hours.

Geometry.—The paper shall contain questions on practical and on theoretical geometry. Every candidate shall be expected to answer questions in both branches of the subject.

The questions on practical geometry shall be set on the constructions contained in the annexed Schedule A, together with easy extensions of them. In cases where the validity of a construction is not obvious, the reasoning by which it is justified may be required. Every candidate shall provide himself with a ruler graduated in inches and tenths of an inch, and in centimetres and millimetres, a set square, a protractor, compasses and a hard pencil. All figures should be drawn accurately. Questions may be set in which use of the set square or the protractor is forbidden.

The questions on theoretical geometry shall consist of theorems contained in the annexed Schedule B together with questions upon these theorems, easy deductions from them, and arithmetical illustrations. Any proof of a proposition shall be accepted which appears to the examiners to form part of a systematic treatment of the subject ; the order in which the theorems are stated in Schedule B is not imposed as the sequence of their treatment.

In the proof of theorems and deductions from them, the use of hypothetical constructions shall be permitted. Proofs which are only applicable to commensurable magnitudes shall be accepted.

SCHEDULE A.

Bisection of angles and of straight lines.

Construction of perpendiculars to straight lines.

Construction of an angle equal to a given angle.

Construction of parallels to a given straight line.

Simple cases of the construction from sufficient data of triangles and quadrilaterals.

Division of straight lines into a given number of equal parts or into parts in any given proportions.

Construction of a triangle equal in area to a given polygon.

Construction of tangents to a circle and of common tangents to two circles.

Simple cases of the construction of circles from sufficient data.

Construction of a fourth proportional to three given straight lines and a mean proportional to two given straight lines.

Construction of regular figures of 3, 4, 6 or 8 sides in or about a given circle.

Construction of a square equal in area to a given polygon

SCHEDULE B.

If a straight line stands on another straight line, the sum of the two angles so formed is equal to two right angles; and the converse.

If two straight lines intersect, the vertically opposite angles are equal.

When a straight line cuts two other straight lines, if (i) a pair of alternate angles are equal or (ii) a pair of corresponding angles are equal, or (iii) a pair of interior angles on the same side of the cutting line are together equal to two right angles, then the two straight lines are parallel; and the converse.

Straight lines which are parallel to the same straight line are parallel to one another.

The sum of the angles of a triangle is equal to two right angles.

If the sides of a convex polygon are produced in order, the sum of the angles so formed is equal to four right angles.

If two triangles have two sides of the one equal to two sides of the other, each to each, and also the angles contained by those sides equal, the triangles are congruent.

If two triangles have two angles of the one equal to two angles of the other, each to each, and also one side of the one equal to the corresponding side of the other, the triangles are congruent.

If two sides of a triangle are equal, the angles opposite to these sides are equal; and the converse.

If two triangles have the three sides of the one equal to the three sides of the other, each to each, the triangles are congruent.

If two right-angled triangles have their hypotenuses equal, and one side of the one equal to one side of the other, the triangles are congruent.

If two sides of a triangle are unequal, the greater side has the greater angle opposite to it; and the converse.

Of all the straight lines that can be drawn to a given straight line from a given point outside it, the perpendicular is the shortest.

The opposite sides and angles of a parallelogram are equal, each diagonal bisects the parallelogram, and the diagonals bisect one another.

If there are three or more parallel straight lines, and the intercepts made by them on any straight line that cuts them are equal, then the corresponding intercepts on any other straight line that cuts them are also equal.

Parallelograms on the same or equal bases and of the same altitude are equal in area.

Triangles on the same or equal bases and of the same altitude are equal in area.

Equal triangles on the same or equal bases are of the same altitude.

Illustrations and explanations of the geometrical theorems corresponding to the following algebraical identities:

$$k\ (a + b + c \ldots) = ka + kb + kc + \ldots$$
$$(a + b)^2 = a^2 + 2ab + b^2 \ldots$$
$$(a - b)^2 = a^2 - 2ab + b^2 \ldots$$
$$(a^2 - b^2) = (a + b)\ (a - b).$$

The square on a side of a triangle is greater than, equal to, or less than the sum of the squares on the other two sides, according as the angle contained by those sides is obtuse; right, or acute. The difference in the cases of inequality is twice the rectangle contained by one of the two sides and the projection on it of the other.

The locus of a point which is equidistant from two fixed points is the perpendicular bisector of the straight line joining the two fixed points.

The locus of a point which is equidistant from two intersecting straight lines consists of the pair of straight lines which bisect the angles between the two given lines.

A straight line, drawn from the centre of a circle to bisect a chord which is not a diameter, is at right angles to the chord; conversely, the perpendicular to a chord from the centre bisects the chord.

There is one circle, and one only, which passes through three given points not in a straight line.

In equal circles (or in the same circle) (i) if two arcs subtend equal angles at the centres, they are equal; (ii) conversely, if two arcs are equal, they subtend equal angles at the centres.

In equal circles (or in the same circle) (i) if two chords are equal, they cut off equal arcs; (ii) conversely, if two arcs are equal, the chords of the arcs are equal.

Equal chords of a circle are equidistant from the centre: and the converse.

The tangent at any point of a circle and the radius through the point are perpendicular to one another.

If two circles touch, the point of contact lies on the straight line through the centres.

The angle which an arc of a circle subtends at the centre is double that which it subtends at any point on the remaining part of the circumference.

Angles in the same segment of a circle are equal; and, if the line joining two points subtends equal angles at two other points on the same side of it, the four points lie on a circle.

The angle in a semicircle is a right angle; the angle in a segment greater than a semicircle is less than a right angle; and the angle in a segment less than a semicircle is greater than a right angle.

The opposite angles of any quadrilateral inscribed in a circle are supplementary; and the converse.

If a straight line touch a circle, and from the point of contact a chord be drawn, the angles which this chord makes with the tangent are equal to the angles in the alternate segments.

If two chords of a circle intersect either inside or outside the circle the rectangle contained by the parts of the one is equal to the rectangle contained by the parts of the other.

If a straight line is drawn parallel to one side of a triangle, the other two sides are divided proportionally ; and the converse.

If two triangles are equiangular their corresponding sides are proportional; and the converse.

If two triangles have one angle of the one equal to one angle of the other and the sides about these equal angles proportional, the triangles are similar.

The internal bisector of an angle of a triangle divides the opposite side internally in the ratio of the sides containing the angle, and likewise the external bisector externally.

The ratio of the areas of similar triangles is equal to the ratio of the squares on corresponding sides.

Text-book recommended:—Godfrey and Siddons' Elementary Geometry (Pitt Press, Cambridge), or Hall and Stevens' School Geometry.

An alternate paper will be set on the Ontario Junior Matriculation requirements in this subject.

One examination paper of two hours.

Advanced Mathematics.

Algebra.—The three progressions, ratio, proportion, variation, permutations and combinations, binomial theorem, logarithms, theory of quadratic equations, as in the remainder of Hall and Knight's Elementary Algebra (omitting Chaps 40 to 44 inclusive), or as in similar text-books.

One examination paper of two hours.

Geometry.

Constructions.

To draw the inscribed, escribed, and circumscribing circles of a triangle.

To construct triangles under given conditions.

To divide a given line externally and internally in medial section.

To construct an isosceles triangle, such that each of the base angles is twice the vertical angle.

To describe a regular pentagon.

To construct a polygon similar to a given polygon, and such that their areas are in a given ratio.

To construct a figure equal in area to a given figure A, and similar to another figure B.

Theorems.

If two sides of one triangle be equal respectively to two sides of another, that with the greater contained angle has the greater base; and conversely.

If a triangle is such that the square on one side is equal to the sum of the squares on the other two sides, the angle contained by these sides is a right angle.

The three medians of a triangle are concurrent.

Perpendiculars from the angles to the opposite sides of a triangle are concurrent.

The complements of parallelograms about the diagonal of any parallelogram are equal.

If the circumference of a circle be divided into n equal arcs:—

(1) The points of division are the vertices of a regular polygon of n sides inscribed in the circle.

(2) If tangents be drawn to the circle at these ponts, these tangents are the sides of a regular polygon of n sides circumscribed about the circle.

If $OA:OB=OC^2$, OC is a tangent to the circle through A B C.

If two triangles have an angle in each equal, and the sides about two other angles proportional, the remaining angles are equal or supplemental.

The perpendicular from the right angle of a right-angled triangle on the hypotenuse divides the triangle into two triangles which are similar to the original triangle.

The sum of the rectangles contained by the opposite sides of a quadrilateral, about which a circle can be described, is equal to the rectangle contained by its diagonals.

The squares on two sides of a triangle are together equal to twice the square on half the third side and twice the square on the median to that side.

If from the vertical angle of a triangle a straight line be drawn perpendicular to the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circle described about the triangle.

If the vertical angle of a triangle be bisected by a straight line which also cuts the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the segments of the base together with the square on the straight line which bisects the angle.

The areas of two similar polygons are as the squares on corresponding sides.

In a right angled triangle the rectilineal figure described on the hypotenuse is equal to the sum of the similar and similarly described figures on the other two sides.

If three lines be proportional, the first is to the third as the figure on the first is to a similar figure on the second.

If the straight lines joining a point to the vertices of a given polygon are divided (all externally or all internally) in the same ratio, the two points of division are the vertices of a similar polygon.

Two similar polygons may be so placed that the lines adjoining corresponding points are concurrent.

Triangles of equal altitude are as their bases.

In equal circles, angles, whether at the centres or circumferences, are proportional to the arcs on which they stand.

If P is any point on the circumscribing circle of a triangle, ABC, and PL, PM, PN are perpendicular to BC, CA, AB, respectively, LNM is a straight line.

A point P moves so that the ratio of its distances from two fixed points, Q and R, is constant; prove that the locus of P is a circle.

Areas.

Area of a circle.
Area of a sector of a circle.
Area of a segment of a circle.

Use of Squared Paper.

Marking points.
Finding areas of rectilinear and curvilinear figures.
Examples of plotting loci; in particular, the ellipse, hyperbola, and parabola.
Examples of Loci and Envelopes.

Deductions and Applications.

Deductions from and simple applications of the constructions and theorems given above.

Text-book:—Godfrey and Siddons' Elementary Geometry (Pitt Press, Cambridge), or Hall and Stevens' School Geometry.

An option will be set in Geometry on the work prescribed for Honour Matriculation in the Province of Ontario.

Trigonometry.—Measurement of angles, trigonometrical ratios or functions of one angle, of two angles, and of a multiple angle; as in Lock's Elementary Trigonometry, Chaps. I to XII; Hall and Knight's Trigonometry, Chaps. I to XII, inclusive, omitting Chap. V. or as in similar text-books.

For Trigonometry and Advanced Geometry, one examination paper of three hours.

Botany.

Text-books recommended:—Bergen and Davis, Principles of Botany, or Atkinson, Elementary Botany.

One examination paper of two hours.

Chemistry.

Elementary inorganic chemistry, comprising the preparation and properties of the chief non-metallic elements and their more important

compounds, the laws of chemical action, combining weight, etc. Text-book:—"Elementary Chemistry for High Schools," by Nevil Norton Evans (Educational Book Company, Limited, Toronto), Chaps. I to XVI inclusive.

One examination paper of two hours.

Physics.

Properties of matter; elementary mechanics of solids and fluids, including the laws of motion, simple machines, work, energy; fluid pressure and specific gravity; thermometry, the effects and modes of transmission of heat.

Text-books recommended:—Gage's Introduction to Physical Science, 1902 edition (Ginn & Co.), Chaps. I to IV, inclusive; or Household Physics, by C. J. Lynde (Macmillan Co. of Canada), chaps. i to xiii, inclusive.

One examination paper of two hours.

SEPTEMBER EXAMINATION.

The September matriculation examination in 1919 will commence on Thursday the 18th.

Special arrangements may be made for the examination of candidates who are prevented by severe illness or domestic affliction from presenting themselves on the dates fixed.

SENIOR MATRICULATION.

(1) *For admission to Second Year Arts—B.A. Course.*

SUBJECTS OF EXAMINATION.

1. **Latin** or **Greek.**
2. **English.**
3. **History.**
4. **Latin** *or* **Greek** (the one not already taken) *or* **French** *or* **German.**
5. **Mathematics** (**Algebra, Geometry** and **Trigonometry**).
6. **Physics.**

Candidates intending to take the Double Course in Arts and Medicine must take German instead of Physics.

(2) *For admission to second Year Arts—B.Sc. Course.*

1. **Chemistry.**
2. **English.**
3. **French.**
4. **German.**
5. **Mathematics.**
6. **Physics.**

This examination is held under the same regulations as apply in the case of students of the first year. It will be held only in September, commencing in 1919, on the 18th.

FEES.

For the first examination	$15.00
For a subsequent examination, per subject	2.00

REQUIREMENTS IN EACH SUBJECT.

For the Year 1920.

Chemistry.

Text-books:—Alex. Smith, General Chemistry; or Macpherson and Henderson, General Chemistry, as for second year.

English.

Composition.—The examination will be designed mainly to test the candidate's ability to write English. He will be expected to have acquired a fairly clear and accurate style, to be able to arrange material in an effective fashion, and to show discrimination in the choice of words. In preparation for the examination, it is suggested that students be required to write mainly on simple, expository subjects that are within the range of their actual experience.

Carpenter's Rhetoric and English Composition (Macmillan) is recommended as a suitable text-book.

Literature.—The examination will be based on the following texts:—Chaucer's Prologue to the Canterbury Tales; Spenser's Faerie Queene, Book I, Cantos 1 and 2; Shakespeare's Macbeth and As You Like It; Milton's Minor Poems (L'Allegro, Il Penseroso, Lycidas and Comus); and Bunyan's Pilgrim's Progress, Part I.

Candidates will also be expected to read Long's English Literature (Ginn & Co.), Chapters I-VII, inclusive, with special emphasis on the portions most closely connected with the foregoing list of books.

French.

(1) *For B.A. Course.*

Vreeland & Koren, French Syntax and Composition (Holt); Super, Histoire de France (Holt); About, Roi des Montagnes (Heath); Erckmann-Chatrian, Waterloo (Heath); Dumas, La Question d'Argent (Allyn & Bacon); Merimee, Quatre Contes (Holt); Bruce, Recit et Contes de la Guerre de 1870 (Holt).

(2) *For B.Sc. Course.*

The requirements for Junior Matriculation as on page 53, and Bowen, A First Scientific French Reader (Heath).

German.

(1) *For B.A. Course.*

Van der Smissen und Fraser, High School German Grammar (Copp, Clark Co.); Heyse, Die Blinden (Holt); Moser, Ultimo (Holt); Stern, Geschichten von deutschen Stadten (American Book Co.).

(2) *For B.Sc. Course.*

The requirements for Junior Matriculation (page 53), or the course in Beginners' German (page 133).

Greek.

Homer, Iliad, XVIII (Platt, Blackie's Illustrated Series); Euripides, Hecuba (Upcott, Bell's Illustrated Classics); Lysias, pages 108 to 140 in Shuckburgh's Lysias, Orationes (Macmillan).

N.B.—Although the above editions are suggested, others may be used.

The examination will include a paper on grammar, composition and sight translation.

One of the following books is recommended for grammar; First Greek Grammar, Rutherford (Macmillan); Goodwin's Greek Grammar (Ginn & Co.).

History.

Gilbert Murray, Greece (Home Univ. Library); Wheeler, Alexander The Great (Heroes of the Nations); Herodotus, Books VII and VIII (Everyman's Translation); Fowler, Rome (Home Univ. Library); Fowler, Social Life at Rome in the Age of Cicero (Macmillan); Botsford, History of Rome (Macmillan); Livy, Book XXI (Everyman's Translation); Plutarch. Lives of Pericles, Caius Gracchus, Cato the Younger and Julius Cæsar.

Latin.

A.—Virgil, Aeneid, VIII (Tetlow, Ginn). B.—Either (1) Livy, Book VI (Laming, Blackie's Illustrated Latin Series), or (2) Pliny, Selected Letters (Prichard and Bernard, Oxford Clarendon Press), Letters 1 to 40 inclusive, omitting letter 21.

The examination will include a paper on grammar, composition and sight translation.

The grammar recommended is:—New Latin Grammar by Sonnenschein (Clarendon Press. N.B.—Note the exact title.)

Mathematics.

Plane and Solid Geometry.—The equivalent of Books IV, VI and XI of Euclid, with supplementary matter from Hall and Stevens' Euclid.

Algebra.—Hall and Knight's Elementary Algebra (omitting chapters 40-42 inclusive), or the same subject matter in similar text-books.

Trigonometry.—Hall and Knight's Elementary Trigonometry to page 210 and chapter 19; nature and use of logarithms (Bottomley's four-figure tables).

Physics.

A general knowledge of the more important principles of elementary physics will be required.

Text-book:—Kimball, College Physics,(Henry Holt & Co., New York, 1912).

ADMISSION TO ADVANCED STANDING.

A student of another university applying for exemption from any subject or subjects which he has already studied is required to submit with his application a Calendar of the University in which he had previously studied, together with a complete statement of the course he has followed and a certificate of the standing gained therein.

The Faculty concerned, if otherwise satisfied, will decide what examination, if any or what other conditions may be necessary before admitting the candidate.

PHYSICAL EXAMINATION AND TRAINING.

In order to promote as far as possible the physical welfare of the student body, every student, on entering the University, will be required to pass a physical examination to be conducted by, or under the direction of, the Medical Director of Physical Education or by a recognized representative.

By such an examination physical defects and weaknesses, amenable to treatment, may be discovered. The student would then be expected to apply to his physician for such remedial measures as his case may require. Those who are examined will also be advised as to the forms of exercise or athletic activities which would likely be beneficial or injurious.

Students who do not present themselves for this examination (or otherwise satisfy the Medical Director), before November 1st, will not be allowed to attend the University.

A further examination will be held after Christmas, when students of the first year will state what they have done, and propose to do, in the way of exercise.

All students entering the University for the first time are required to present a certificate, or other satisfactory evidence, of successful vaccination, failing which, they shall at once be vaccinated in a manner satisfactory to the medical examiner.

At the opening of the session the Medical and Physical Directors will lay before every male student in each of the first three years, a schedule of the sports and physical activities which are available and he will be asked to

state to which form of exercise he intends to apply himself throughout the year.

For regulations concerning students of the Royal Victoria College, see page 287.

AGE OF ADMISSION.

Except under special circumstances, no student under the age of sixteen is admitted to the first year courses in Arts, Applied Science or Medicine, or under the age of seventeen to the second year, and no student under the age of seventeen is admitted to the course in Law.

OPENING AND CLOSING DATES OF SESSION, 1919-1920.

The Session 1919-1920 will open in all Faculties on Wednesday, October 1st, 1919, and on the afternoon of that day (at 5 p.m.) the Principal will deliver the usual opening address in the Assembly Hall of the Royal Victoria College. It will end in the Faculties of Arts, Law and Applied Science on Wednesday, May 12 1920.

For information regarding registration, see page 66.

CLASSES OF STUDENTS.

There are four classes of students in the University:

(1) Graduates—students who have previously obtained an ordinary degree at McGill, or elsewhere, and who are now pursuing courses for the Master's degree (in Arts, Applied Science or Law), or for the degree of Ph.D.

(2) Undergraduates—students who have passed the matriculation examination and, in the case of second, third and fourth year students, all the examinations of their course in the years below that in which they are registered.

(3) Conditioned undergraduates—those with defective entrance qualifications or who have failed in one or more of the subjects of their course in the year below that in which they are registered.

(4) Partial students—comprising all those who, not belonging to one of the above classes, are taking a partial course of study in the University In order to obtain admission, such students must pass the matriculation examination in the subject, or subjects, which they wish to take, or, failing this, must be able to satisfy the Head of the Department concerned that they are qualified to proceed with the course.

REGISTRATION AND ATTENDANCE.

1. REGISTRATION.

BETWEEN SEPTEMBER 22ND AND SEPTEMBER 27TH, BOTH DATES INCLUSIVE, STUDENTS IN LAW AND MEDICINE, AND THOSE WITHOUT CONDITIONS IN APPLIED SCIENCE, MAY REGISTER FOR THE SESSION 1919-1920 AT THE OFFICE OF THE UNIVERSITY REGISTRAR AND STUDENTS IN ARTS AT THE DEAN'S OFFICE*. MONDAY, SEPTEMBER 29TH, WILL BE SPECIAL REGISTRATION DAY FOR NEW STUDENTS. ON TUESDAY, SEPTEMBER 30TH, THOSE WHO HAD BEEN ENROLLED IN ANY PREVIOUS SESSION WILL REGISTER AS FOLLOWS, IF THEY HAVE NOT ALREADY DONE SO:—ARTS STUDENTS IN THE DEAN'S OFFICE,* APPLIED SCIENCE STUDENTS IN THE ENGINEERING BUILDING, AND MEDICAL STUDENTS IN THE OFFICE OF THE UNIVERSITY REGISTRAR. LECTURES WILL COMMENCE ON WEDNESDAY, OCTOBER 1ST. THE COMPLETE REGULATIONS REGARDING REGISTRATION ARE AS UNDER:

1. Candidates entering on a course of study in any Faculty, whether as undergraduates, conditioned undergraduates, partial students, or graduate students, are required to attend at the office of the University Registrar, or such other place as he may designate, some time during the week preceding the opening day of the session, in order to furnish the information necessary for the University records, to register for the particular classes which they wish to attend, and to sign the following declaration in the matricula or register:—

"I hereby accept and submit myself to the statutes, rules, regulations and ordinances of McGill University, and of the Faculty or Faculties in which I am registered, and to any amendents thereto which may be made while I am a student of the University, and I promise to observe the same."

2. On the day immediately before the opening of the session students who had been previously enrolled shall register for particular subjects as follows:—Arts students in the Dean's Office; Medical and Law students at the office of the University Registrar, and Applied Science students in the Engineering Building. With the exception of students in Applied Science, who have conditions, they may also register during the five preceding days at the Registrar's Office.

3. Students who for any reason have failed to register at the times specified above will be permitted to do so at the Registrar's Office within a

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* Women students of the Faculty of Arts are also required to enter in the Roll Book of the Royal Victoria College their names, home addresses and addresses in Montreal. (See page 285).

limited time thereafter. In the Faculty of Applied Science, students previously enrolled who do not register on the regular registration day, Tuesday, September 30th, will be allowed to do so thereafter only when they have paid a fee of $5.00 to the Bursar for late registration.

4. The Registrar is empowered to register all students whose records show that they are entitled to attend the classes applied for. All doubtful cases shall be dealt with by committees as follows: in the case of candidates registering for the first time, by a committee of the Matriculation Board; in the case of all others, by a committee of the Faculty concerned.

5. The names of those who have registered for separate classes shall be sent by the Registrar to the Heads of Departments on registration day and subsequently, as new names are received, and only those for whom cards have been received by an instructor shall be given credit for attendance.

6. Students desiring to make a change in their choice of studies must make application to the Registrar to do so on a regular form. This application must be approved by the Dean of the Faculty in which he is enrolled whereupon due notice will be sent by the Registrar to all parties concerned. No change in registration will be allowed, except under special circumstances after the fifteenth day of the session.

7. Persons who wish to pursue courses in the University without a view to qualifying for a degree shall be classified as partial students and shall not be admitted to any course until they have obtained the permission of the Head of the department concerned. The application must then be approved by the Dean of the Faculty or the committee appointed for this purpose.

8. In the Faculty of Arts, where there is a choice of courses, students in attendance shall be required to choose their electives for the next year before the close of the preceding session, or (in cases where this cannot be done) not later than one week before the opening of the session.

2. ATTENDANCE.

1. Students are required to attend at least seven-eighths of the total number of lectures in any one course. Those whose unexcused absences exceed one-eight of the total number of lectures in a course shall not be permitted to come up for the regular examination in that course; and, in the Faculty of Applied Science, those whose unexcused absences have exceeded one-fourth of the total number of lectures in any course must repeat the work in that course.

Excuses on the ground of illness or domestic affliction shall be dealt with only by the Deans of the respective Faculties.

2. A record shall be kept by each professor or lecturer, in which the presence or absence of students shall be carefully noted. This record shall be submitted to the Faculty when required.*

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* Physical education is included under this regulation.

3. Credit for attendance on any lecture or class may be refused on the grounds of lateness, inattention, neglect of study, or disorderly conduct in the class room or laboratory. In the case last mentioned the student may, at the discretion of the Professor, be required to leave the room. Persistence in any of the above offences aganst discipline shall, after admonition by the Professor, be reported to the Dean of the Faculty concerned. The Dean may, at his discretion reprimand the student, or refer the matter to the Faculty at its next meeting, and may in the interval suspend from classes.

4. The following special regulation with regard to marking the attendance of students has been adopted by the Faculties of Arts and Applied Science:—

Lectures will commence at five minutes after the hour, on the conclusion of the roll call. After the commencement of a lecture students are not allowed to enter, except with the permission of the Professor. If permitted to enter, they will, on reporting themselves at the close of the lecture, be marked "late." Two lates will count as one absence. Lectures end at five minutes before the hour.

STUDENTS' EXPENSES.

1. BOARD AND RESIDENCE.

No college residences have as yet been erected for men students, but dormitory accommodation for about 60 is provided in Strathcona Hall, the home of the McGill Y.M.C.A. Full particulars concerning terms of residence, etc., may be obtained from the Secretary of the Association, 348 Sherbrooke street west, Montreal, who will also make arrangements to have students who are strangers to the City met on arrival and helped to secure lodgings, if due notice is sent of the station and time at which they will arrive.

A list of suitable boarding and lodging houses in the city is prepared about a fortnight before the opening of the session each year, and may be obtained on application to the Secretary of the McGill Y.M.C.A., Strathcona Hall.

Women students may board and reside either in private houses or in the Royal Victoria College, which provides, in addition to separate lecture rooms, residental accommodation for the women students of the University. The expense of board and residence for the session in the Royal Victoria College is $340. Students who remain for the summer classes pay a fee of $50, which includes board, residence and instruction. Further particulars will be furnished by the Warden.

Board and lodging can be obtained in private houses in the vicinity of the University buildings at a cost of from $50 and upwards per month; or, separately, board at $35 to $45 per month, rooms from $12 to $18 per month.

Board is furnished in the McGill Union at low rates. The dining room, which is a special feature of the Union, will accommodate over 120 students at a time. There is also a lunch counter where meals are served *a la carte.*

2. APPROXIMATE ESTIMATE OF COST OF COURSE.

(The session extends from October 1st to May 1st.)

Faculty of Arts (men).*

	Minimum	Moderate
Tuition Fees	$ 58	$ 58
Fee for Athletics, Union, etc.	10	10
Board and Lodging	350	420
Books and Apparatus	17	22
	$435	$510

Faculty of Applied Science.

(The session extends from October 1st to May 1st.)

	Minimum	Moderate
Tuition Fees	$197†	$197†
Fee for Athletics, Union, etc.	10	10
Board and Lodging	350	420
Books and Instruments	38	48
	$595	$675

Students attending summer courses, required in certain years, for an additional period of one month, will have to spend from $50 to $60 extra in those particular years.

Faculty of Medicine.

(The session extends from October 1st to May 25th.)

	Minimum	Moderate
Tuition Fees	$147	$147
Fee for Athletics, Union, etc.	10	10
Board and Lodging	400	480
Books, Instruments, etc.	53	63
	$610	$700

* For estimate of expenses for women students see page 286 and the Announcement of the Royal Victoria College.

†In the case of students in Architecture, this fee is only $147.00, but the course extends over five years.

Undergraduates in Arts residing in affiliated theological colleges, with a view to a course in theology, are able to obtain board and lodging for less than the minimum shown above, and in all Faculties the expense under the head of "Books and Instruments" can be reduced by purchasing these at second-hand.

It will be noticed that in the above estimate no account is taken of personal expenses, such as cost of clothes, laundry, etc., nor yet of the caution money deposit which is made by each student at the commencement of the session. This amounts to $5.00 in the Faculties of Arts and Law and $10.00 in the Faculties of Medicine and Applied Science. It might be well also to reckon on at least $20.00 or $25.00 per annum for subscriptions of various kinds.

LOAN FUNDS.

1. A fund has been established by the Applied Science Class of 1899, to be known as "The Class of 1899 Fund," for the purpose of aiding, each year, one or more students who, upon the comp letion of their second year work, require assistance to enable them to finish their course of study. The loans from this fund made to students will be repayable after graduation. Applications should be made through the Dean.

2. The George Henry Frost Fund was created by the gentleman whose name it bears for the purpose of aiding students who, when commencing the work of the second or subsequent years, in the Faculty of Applied Science, require assistance to enable them to complete their course. Loans from this fund will bear interest at three per cent. and will be repayable within three years after graduation. In making loans from this fund the academic standing of the students will be taken into account.

SCHOLARSHIPS, FELLOWSHIPS, MEDALS AND PRIZES.

I. SCHOLARSHIPS, EXHIBITIONS AND PRIZES—GENERAL.

1. The Rhodes Scholarship.—This scholarship is of the annual value of £300 sterling and is tenable at the University of Oxford for three years. The scholar must be a British subject, must be over 19 and under 25 years of age, and must have reached at least the end of his sophomore or second year in the University.

Rhodes Scholarships have been awarded as follows:—1904, Herbert J. Rose, B.A., and John G. Archibald, B.A.; 1905, Talbot M. Papineau, B.A.; 1906, Alexander R. McLeod, B.A.; 1908, Frank E. Hawkins, B.A.; 1911, Walter J. Pearse; 1913, W. E. Gladstone Murray, B.A.; 1915, Percy E. Corbett, M.A.; 1919, Terence William Leighton MacDermot, B.A.

2. Science Scholarships granted by Her Majesty's Commissioners for the Exhibition of 1851.—These scholarships, of the value of £200 sterling a year, are tenable for two, or, in rare instances, three years. They are limited, according to the Report of the Commission, "to those branches of science, such as physics, mechanics and chemistry, the extension of which is specially important for our national industries." Their object is not to facilitate ordinary collegiate studies, but "to enable students to continue the prosecution of science with the view of aiding in its advance or in its application to the industries of the country."

It is open to students of not less than three years' standing who have shown evidence of capacity for original research, and is tenable at any university or other institution approved by the Commission.

A nomination to one of these Scholarships may be granted to McGill University in 1921, in which event applications should be sent to the Registrar on or before March 1st.

This Scholarship has been awarded as follows:—

Evans, P. N., 1891; Macphail, J. A., 1892; King, R. O., 1895; Gill, J. L. W., 1897; McLean, W. B., 1899; McClung, R. K., 1901; Cooke, H. Lester, 1903; Johnson, F. M. G., 1905; Simpson, J. C., 1907; Boyle, R. W., 1909; Shaw, A. Norman, 1911; Meldrum, W. Buell, 1912; Maass, Otto, 1913; Warneford, Frank H. S., 1915; John Russell, B.A., 1919.

3. The Dr. T. Sterry Hunt Research Scholarship in Chemistry.—It is proposed to offer this scholarship each year to graduate students in the Faculties of Arts and Applied Science.

4. The P. S. Ross Exhibition of $100.00, founded by Mr. P. D. Ross, B.A.Sc., in memory of his late father, Mr. P. S. Ross, and given

through the Ottawa Valley Graduates' Society, will be awarded annually to the candidate from the Ottawa Valley for entrance to any Faculty, who obtains the highest percentage at the June matriculation examination, and attends the University during the ensuing session.

5. The Ottawa Valley Graduates' Society Exhibition, value $50. This exhibition will be awarded annually to the candidate from the Ottawa Valley for entrance to any Faculty who obtains the second highest percentage at the June matriculation examination and attends the University during the ensuing session.

6. The Sidney J. Hodgson Exhibitions, founded by his father, Arthur J. Hodgson, Esq., in memory of his late son, Sidney James Hodgson, a student of the First Year in Arts, who was killed in action on September 27th, 1918 while serving in the 66th Battery of the Canadian Field Artillery. One of these exhibitions is of the value of $125, tenable in the Faculty of Arts and another of the value of $300 tenable in the Faculty of Applied Science. They are open to pupils of the Westmount High School who have been in attendance for at least one year and will be awarded on the result of the June matriculation examination to the two pupils who obtain the highest percentage on the subjects required for entrance to the Faculties of Arts or Applied Science as the case may be, and who attend the university during the ensuing session.

7. The Chester Macnaghten Prize of the value of $25.00 in books, established by Russel E. Macnaghten, Esq., M.A., in memory of his late uncle, will be awarded annually, through the University Literary and Debating Society, for reading in English.

II. SCHOLARSHIPS AND EXHIBITIONS IN ARTS.*

GENERAL REGULATIONS.

1. No student can hold more than one exhibition or scholarship at the same time.

2. Exhibitions and scholarships will not necessarily be awarded to the candidates who have obtained the highest marks. An adequate standard of merit will be required.

3. If in any college year there be not a sufficient number of candidates showing adequate merit, any one or more of the exhibitions or scholarships offered for competition may be given to more deserving candidates in another year.

4. A successful candidate must, in order to retain his scholarship or exhibition, proceed regularly with his college course to the satisfaction of the Faculty.

5. The annual income of the scholarships or exhibitions will be paid in four instalments, viz:—In October, December, February and April, about the 20th of each month.

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* An exhibition is tenable for one year; a scholarship for two.

SCHOLARSHIPS AND EXHIBITIONS AVAILABLE IN ARTS.

The MacDonald Scholarships, founded by the late Sir William C. MacDonald. Ten scholarships of the annual value of $125 each.

The Jane Redpath Exhibition, founded by the late Mrs. Redpath, of Terrace Bank, Montreal:—value $115; open to both men and women.

The Charles Alexander Scholarship (for men students), founded by the late Charles Alexander, Esq., Montreal, for the encouragement of the study of Classics and other subjects:—value, $115.

The Major H. Mills Scholarship, founded by bequest of the late Major Hiram Mills—value, $115.

The Barbara Scott Scholarship, founded by the late Miss Barbara Scott, Montreal, for the encouragement of the study of the Classical languages and literature:—value, $115.

Four Mackenzie Exhibitions for Economics and Political Science, founded in memory of the late Hon. Alexander Mackenzie:— value $50 to $100. (For particulars, see page 75).

Two Howard Murray Exhibitions for History, maintained by Howard Murray, Esq., for a period of five years; value, $100. (For particulars, see page 76.)

The Sir William Dawson Exhibition, given by the New York Graduates' Society:—value, $60.

The Hannah Willard Lyman Exhibition:—value, $80.

The Dr. Barclay Exhibition, to be awarded in the Classical Department: —value, $50.

The Houston Exhibition, available for students studying for the Presbyterian Ministry:—value, $50.

FIRST YEAR SCHOLARSHIPS AND EXHIBITIONS IN ARTS.

I. Exhibition Granted by the Graduates' Society of the District of Bedford.

This exhibition, of the value of $120, will be awarded annually to a "matriculated student in Arts whose parents reside in the District of Bedford, and whose candidature has been approved by a committee of the Society."

II. Narcissa Farrand (Mrs. N. Pettes) Scholarship.

This scholarship, of the value of $300 ($150 for two years), founded by Mr. amd Mrs. H. V. Truell, of Sweet Acre, Knowlton, Que., and endowed by them with the sum of $7,000 out of the Narcissa Farrand Fund, will be awarded annually to the candidate from the Eastern Townships who obtains the highest marks at the Arts matriculation examination in June, and who has had his domicile in the Eastern Townships for five consecutive years immediately preceding the examination. Intending competitors must apply to the Registrar before July 1st each year.

III. The Trafalgar Exhibition.

This exhibition was founded in 1913 by certain friends and former pupils of Miss Grace Fairley, to signalize her long and faithful services to education in Montreal, and particularly as head of the Trafalgar Institute. It is of the value of $135, is tenable for one year only, and will be awarded annually to the student of Trafalgar Institute who obtains the highest marks in the June matriculation examination and matriculates as an undergraduate in the Faculty of Arts.

IV. University Entrance Exhibitions.

For financial reasons, the value of these exhibitions for 1920 has been reduced to ten per cent. of the amount hitherto given, and they will be awarded in the form of book prizes. Candidates must apply before July 1st.

V. The Hon. Robert Jones Scholarship.

THE HON. ROBERT JONES' SCHOLARSHIP, having a value of One Hundred and Twenty-five Dollars ($125.00) per annum, "is granted from time to time to some poor student for the full term of study in the Faculty of Arts."

Application for this scholarship should be made through the Dean of the Faculty of Arts. In awarding the scholarship the standing of the student in the matriculation examination will be considered, and the scholarship will not be continued if the standing of the student at any time during his course proves to be unsatisfactory.

SECOND YEAR EXHIBITIONS IN ARTS.

Only two of these exhibitions will be awarded in 1919, value $60 each. Particulars can be obtained at the Registrar's Office.

Applications for this examination must be made before July 1st.

THIRD YEAR SCHOLARSHIPS AND EXHIBITIONS IN ARTS.

Four scholarships of the value of $75 each per year are offered for competition in 1919, and three exhibitions of the value of $40 each. Particulars regarding these can also be obtained at the Registrar's Office.

Applications for this examination must be received by the Registrar before July 1st.

The following special exhibitions are also available in the third and fourth years :—

Mackenzie Exhibitions.

Four exhibitions, known as the Mackenzie Exhibitions, are awarded annually in the Department of Economics and Political Science. Two of these, of the value respectively of $100 and $50, tenable for one year, are

awarded on the result of the second year examination in political economy (Economics, Course 1) but no student is eligible who has not completed the work of this year. The tenure of the exhibitions is conditional upon the holders pursuing their studies in the honour work in economics and political science of the third year. The other two exhibitions, of the value respectively of $100 and $50, are awarded on the results of the honour examination of the third year in economics and political science. The exhibitions will not be awarded except on satisfactory evidence of merit; their tenure is conditional upon the holders pursuing their studies in the honour work in economics and political science of the fourth year.

A fourth year Mackenzie exhibition may be held by a student who holds another; a third year exhibition cannot.

Murray Exhibitions.

Two exhibitions of the value of $100 each, tenable for one year, will be awarded annually to men in the Department of History. These exhibitions are maintained for a period of five years, from 1915, by Howard Murray, Esq. One of them will be awarded on the result of a special examination open to students who have completed the work of the second year. Its tenure is conditional upon the holder taking the honour course in history in the third year. The other exhibition will be awarded in the fourth year on the result of the honour examination of the third year. Its tenure is conditional upon the holder taking the honour course. Neither exhibition will be awarded except upon satisfactory evidence of merit and at the discretion of the Department.

The texts prescribed for the Third Year exhibition are as follows:—

Gibbon's Decline and Fall of the Roman Empire, Chaps. I, II, III, XIII, XIV, XL; Bryce's Holy Roman Empire; The Mediæval Empire, Vol. I, Editor Herbert Fisher (Macmillan.)

GRADUATE SCHOLARSHIP IN ARTS.

The Allen Oliver Scholarship (in Economics and Political Science). This scholarship has been established by Mrs. Frank Oliver, of Edmonton, Alta., in "proud and loving memory of her son, the late Allen Oliver, B.A.,* M.C., Lieutenant 26th Battery, C.F.A., who was killed in action at the Somme on November 18th, 1916." The scholarship will be awarded annually to the student who stands highest in First Class Honours in the Department of Economics and Political Science at the final B.A. examination, and the holder is required to pursue his studies in Economics and Political Science in some university outside of Canada.

The first award will be made in 1921 (class entering in 1917).

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* Lieut. Oliver was an Honour graduate of 1915 in the Department of Economics and Political Science.

III. MEDALS IN ARTS.

Gold Medals will be awarded in the B.A. Honour examinations to students who take the highest honours of the first rank in the subjects stated below, and who shall have passed creditably the ordinary examination for the degree of B.A., provided they have been recommended therefor to the Corporation by the Faculty, on the report of the examiners:—

The Henry Chapman Gold Medal, for Classical Languages and Literature.
The Prince of Wales Gold Medal, for Mental and Moral Philosophy.
The Anne Molson Gold Medal, for Mathematics and Natural Philosophy.
The Shakespeare Gold Medal, for English Language and Literature.
The Logan Gold Medal, for Geology, Mineralogy and Palæontology.
The Major Hiram Mills Gold Medal, for Biology.
The Governor-General's Gold Medal, for Modern Languages and Literature.
The Allen Oliver Gold Medal, for Economics and Political Science, (founded by Mrs. Frank Oliver, in memory of her late son, Allen Oliver, B.A., M.C., Lieutenant 26th Battery, C.F.A., who was killed in action at the Somme, on November 18th, 1916).

In addition to the above, certain medals are offered annually by the Alliance Francaise, at the discretion of the Department of Modern Languages.

If there be no candidate for any medal, or if none of the candidates fulfill the required conditions, the medal will be withheld, and the proceeds of its endowment for the year may be devoted to prizes in the subject for which it was intended.

IV. PRIZES IN ARTS.

1. The Neil Stewart Prize.—An annual prize of $15 is open to all undergraduates and graduates of this University, and also to graduates of any other university, who are students of theology in some college affiliated to this University. It will be awarded on the result of the sessional examination in Hebrew of the second year.

The prize, founded by the late Rev. C. C. Stewart, M.A., and terminated by his death, was re-established by the liberality of the late Neil Stewart, Esq., of Vankleek Hill.

2. Early English Text Society's Prize.—This prize, the annual gift of the Early English Text Society, will be awarded for proficiency in the subjects of the language group in the English honour curriculum of the third and fourth years.

3. New Shakespeare Society's Prize.—This prize, the annual gift of the New Shakespeare Society, open to graduates and undergraduates, will be awarded for a critical knowledge of the following plays of Shakespeare:—Hamlet, Macbeth, Othello, King Lear.

4. Charles G. Coster Memorial Prize.—This prize, of the value of $25.00, and intended as a tribute to the memory of the late Rev. Chas. G.

Coster, M.A., Ph.D., Principal of the Grammar School, St. John, N.B., is offered for competition, by Mr. Colin H. Livingstone, B.A., to undergraduates (men and women) from the Maritime Provinces (Nova Scotia, New Brunswick and Prince Edward Island). It is awarded on the decision of the Dean of the Faculty of Arts to that student in Arts from the Maritime Provinces who shows the greatest proficiency in the examinations at the end of the session.

5. Annie Macintosh Prize.—The income of the sum of $1,130.00 ($425 of which was subscribed by the pupils and friends of the late Miss Annie M. Macintosh, and $618.97 bequeathed by the late Miss L. G. Macintosh), will be offered as a prize or prizes, to students of the Royal Victoria College in such subject, or for such work as the Faculty may determine.

6. Penhallow Prize.—The income of the sum of $1,130 collected by the Arts Undergraduates Society in 1911, will be assigned annually to the Department of Botany for a prize to be known as the "Penhallow" prize.

The names of those who have taken honours or certificates will be published in order of merit, with mention, in the case of students of the first and second years, of the schools in which their preliminary education has been received.

V. SCHOLARSHIPS, EXHIBITIONS AND PRIZES IN APPLIED SCIENCE.

1. Awarded on the result of Special Examinations.

1. Two prizes, each of $10.00, presented by J. M. McCarthy, Esq., B.A.Sc., to students entering the third year, for proficiency in levelling and transit work.

2. Messrs. Babcock & Wilcox, Limited, offer every second year a scholarship of the value of $200.00 per annum, tenable for two years, to the best all-round man among the Engineering students who, having completed the work of the first and second years, is about to enter the third year, and who intends to make a special study of the subject of Steam Engineering. The conditions under which this scholarship is awarded may be ascertained on application to the Dean of the Faculty.

3. Scholarships covering four years' tuition in the Faculty of Applied Science are awarded annually by the Canadian Pacific Railway Company. These are open for competition to apprentices and other employees of the Company under twenty-one years of age, as well as to minor sons of employees, and the award is made on the result of the June Matriculation Examination. For full particulars as to number of scholarships available, etc., application should be made to C. H. Buell, Esq., Staff Registrar and Secretary, Pension Department, C.P.R. Offices, Montreal.

4. The P. S. Ross Entrance Exhibition. For particulars, see page 72.

II.—Awarded on results of Sessional Examinations or for special theses.

1. A British Association exhibition of $50.00 and a prize of $25.00 at the end of the third year, to the students who obtain the highest and the second highest aggregate marks, respectively, in the sessional examinations in strength of materials and mechanics of the third year.

2. Three prizes of $25.00, $15.00 and $10.00, at the end of the second year, to the students obtaining the highest ,and the second and third highest, aggregate marks, respectively, in the sessional examinations in analytic geometry, calculus and mechanics of the second year.

3. A Scott exhibition of $50.00, founded by the Caledonian Society of Montreal, in commemoration of the centenary of Sir Walter Scott, and two prizes of $25.00 and $15.00, at the end of the first year to the students obtaining the highest, and the second and third highest aggregate marks, respectively, in the sessional examinations in the mathematics, descriptive geometry and physics of the first year.

4. Workshop Prize.—A prize of $20.00 presented by Mr. C. J. Fleet, B.A., B.C.L., for bench and lathe work in the wood-working department, open to students of not more than two terms standing in workshop practice.

5. A prize of $50.00, presented by Mr. James Tighe, B.A.Sc., for research work in hydraulics.

6. An exhibition offered to graduates by Mr. A. E. Childs, M.Sc., for a special research on "The flow of gas through pipes under pressure."

7. A prize of $25.00, presented by Messrs. Anglin's, Ltd., to the student obtaining the highest aggregate marks in the subject of architectural drawing in the second year of the Department of Architecture.

8. A prize of $25.00, presented by Messrs. Anglin's, Ltd., to the student obtaining the highest aggregate marks in construction (Courses Nos. 24, 25, 26, 27) in the second and third years in the Department of Architecture.

9. The Louis Robertson Prize, founded by Mr. and Mrs. John A. Robertson, in memory of their son, John Louis Armour Robertson, who was killed in the Great War, on July 18th, 1916. To be awarded to the undergraduate student who ranks highest in Design in the final year of the course in Architecture.

10. The following prizes are offered for the best summer essays:—

To the students of the Civil Engineering course a prize of $25.00, presented by Charles Graham Drinkwater, Esq., B.Sc.

To the students of the Electrical Engineering course, from a friend, a prize of $25.00.

To the students of the Metallurgical course, a prize of $25.00, presented by Milton L. Hersey, Esq., D.Sc.

To the students of the Mechanical Engineering course, a prize of $25.00 presented by the Crosby Steam Gauge and Valve Co.

To the students of the Mining Engineering course, a prize of $25.00, presented by J. T. McCall, Esq.

Four prizes, each of the value of $25.00, are offered for competition to student members of the Engineering Institute of Canada, for the best papers on subjects in any department of engineering. The summer theses prepared by students of this Universty are available for this competition.

Three prizes, each of the value of $25.00, and the President's gold medal, are offered for competition to student members of the Canadian Mining Institute for the best papers on mining subjects.

11. In the Department of Architecture two prizes will be offered at the opening of the session to those students of the Department submitting the best architectural drawings.

12. The sum of $50.00 has been voted by the Undergraduates' Society of the Faculty of Applied Science, to be given as prizes for the best papers read before the Society during the session 1919-20.

13. Certificates of merit are given to such students as take the highest place in the sessional and degree examinations.

III.—Awarded at the Discretion of the Faculty.

1. The Hon. Robert Jones' Scholarship, having a value of One Hundred and Twenty-five Dollars ($125.00) per annum, "is granted from time to time to some poor student for the full term of study in the Faculty of Applied Science."

Application for this scholarship should be made through the Dean of the Faculty of Applied Science. In awarding the scholarship the standing of the student in the matriculation examination will be considered, and the scholarship will not be continued if the standing of the student at any time during his course proves to be unsatisfactory.

2. The Baylis Scholarship, founded in memory of Mr. and Mrs. James Baylis, of Montreal, and having an annual value of $100.00, is awarded to some student who is in need of financial assistance to complete his course on entering the second year of the Faculty. The scholarship will be continued during the third and fourth years, if the student's standing continues to be satisfactory.

Two of these scholarships may be available for the session 1919-20, but only one would be continued beyond the second year.

Applications should be made through the Dean of the Faculty of Applied Science.

3. Three research and teaching fellowships, of the value of $500 each, have been established in the Mining Department—one endowed in memory of the late Sir William Dawson, one endowed by the late Dr. James Douglas and a third supported by graduates in Mining in the name of the late Dr. B. J. Harrington. All three fellowships are awarded annually if suitable candidates offer.

4. The late Dr. James Douglas, who was a member of the Board of Governors, provided during his lifetime for twelve, or more, tutorial bursaries in the Faculty of Applied Science. In assigning these bursaries account will be taken of the circumstances of the applicants as well as of their academic standing.

These bursaries have a value of $100.00 per annum, and carry the obligation of giving tutorial instruction equivalent to one evening a week, to the satisfaction of the Faculty Committee. Students in the third and fourth years of Applied Science only are eligible.

VI. MEDALS IN APPLIED SCIENCE.

1. The Governor-General's silver medal (the gift of His Excellency, the Duke of Devonshire) will be awarded for graduate research work.

2. A British Association medal is open for competition to students of the graduating class in each of the nine courses, and, if the examiners so recommend, will be awarded to the student taking the highest position in the final examinations. The British Association medals and exhibition were founded by the British Association for the Advancement of Science, in commemoration of the meeting held in Montreal in the year 1884.

3. A gold medal and three prizes of $25.00, offered by the Canadian Mining Institute For further particulars, see page 228.

4. Honours.—On graduation, honours will be awarded for high standing in professional subjects.

VII. FELLOWSHIPS IN MEDICINE.

The A. A. Browne Memorial Fellowship:—From the proceeds of the sum of $10,000 which was received by the Faculty from the committee of the A. A. Browne Memorial Fund, a fellowship has been established, to be known as the "A. A. Browne Memorial Fellowship." This fellowship is open to graduates of any recognized Medical School and is for the advancement of medical science, special preference being given to the subjects of obstetrics and gynæcology.

The James Douglas Research Fellowship:—This fellowship, founded by the late Dr. James Douglas, with an endowment of $25,000, is awarded to promote co-ordinated research in the laboratories of pathology in or associated with the University.

VIII. MEDALS IN MEDICINE.

1. The Holmes Gold Medal, founded by the Medical Faculty in the year 1865, as a memorial of the late Andrew Holmes, Esq., M.D., LL.D., late Dean of the Faculty of Medicine, is awarded to the student of the graduating class who receives the highest aggregate number of marks in the different branches comprised in the medical curriculum.

The student who gains the Holmes Medal has the option of exchanging it for a bronze medal and the money equivalent of the gold medal.

2. The Sutherland Gold Medal, founded in 1878 by the late Mrs. Sutherland, in memory of her late husband William Sutherland, M.D., formerly Professor of Chemistry in this Faculty, is awarded for the best examination in general and medical chemistry, together with a creditable examination in the primary branches. The examination is held at the end of the third year.

3. The Wood Gold Medal, founded by Casey A. Wood, M.D., is awarded to the student of the graduating class who receives the highest aggregate number of marks in the clinical branches of the final year. The winner of the Holmes Medal and the winner of the Final Prize are not permitted to compete for this medal.

IX. PRIZES IN MEDICINE.

1. The Final Prize.—A prize in books (or a microscope of equivalent value), awarded for the best examination, written and oral in the final branches. The Holmes' medalist is not permitted to compete for this prize.

2. The Fourth Year Prize.—A prize in books, awarded for the best examination, written and oral, in all the branches of the fourth year course.

3. The Joseph Hils Prize.—(Founded by the late Dr. Joseph Hils, of Woonsocket, R.I.)—A prize in books, awarded to the student who obtains the highest number of marks for a special examination in materia medica and therapeutics.

4. The Third Year Prize.—A prize in books, awarded for the best examination, written and oral, in the branches of the third year.

5. The Joseph Morley Drake, M.D., Prize.—(Founded by the late Joseph Morley Drake, M.D.)—A microscope, to be awarded to the student of the third year who obtains the highest number of marks for the examinations in pathology and bacteriology.

6. The Second Year Prize.—A prize in books for the best examination in all the branches of the second year course.

7. The First Year Prize.—A prize in books for the best examination in all the branches of the first year course.

X. EXHIBITIONS AND PRIZES IN LAW.

1. An exhibition, of the value of $50.00 per annum—to be known as the Alexander Morris Exhibition—has been founded in memory of the late Hon. Alexander Morris, M.A., D.C.L., of Toronto, Ont., and will be awarded to the student who obtains the highest standing in the second year.

2. Various money prizes (among the number being a prize of $15.00, given by the Junior Bar Association of the Province of Quebec, to the student of the final year who takes the highest standing in civil procedure), are awarded to the students of each year who obtain the highest distinction at the examination held at the close of the session. No prize will, however, be awarded to any student unless a sufficiently high standing is attained.

3. The Montreal Bar Prize, valne $50.00, is awarded by the Montreal Bar Association for the highest standing in Commercial Law.

4. A travelling scholarship has been established by the Will of the late Sir William Macdonald, "for the purpose of enabling the English-speaking Law students to take a course of studies in France," the donor "deeming it of great importance that the English-speaking members of the legal profession should be proficient in the French language."

The value of this scholarship is the income derived from the sum of $20,000.

XI. MEDALS IN LAW.

1. The Elizabeth Torrance Gold Medal is awarded to the student who obtains the highest marks in the final examinations, provided that his answers are, in the estimation of the Faculty, of sufficient merit to entitle him to this distinction.

XII. MEDALS IN DENTISTRY.

The F. A. Stevenson Gold Medal, founded by Dr. F. A. Stevenson, of Montreal, is awarded to the student in the final year who stands first in the science and practice of Dentistry. The standing will be determined not only by the written and practical examinations at the end of the year, but by the general work of the student during the whole year.

XIII. PRIZES IN DENTISTRY.

Final Year Prize:—A prize in books will be awarded to the final year student who stands second in the class. The standing will be determined in a manner similar to that followed in the awarding of the gold medal.

Third Year Prizes:—Two prizes, in books, will be awarded to third year students in the science and practice of Dentistry. The method of determining the winners of these prizes will be similar to that adopted in awarding the prizes in the final year.

For medals and prizes in the Faculty of Agriculture, see Macdonald College announcement.

FEES.

GENERAL REGULATIONS.

1. Fees shall be paid to the Bursar on or before October 10th. The registration ticket must be shown to the Bursar before the fee is paid. After October 10th an additional fee of $2.00 will be exacted of all students in default.

2. Immediately after October 20th the Bursar shall send to the Deans of the several Faculties a list of the registered students who have not paid their fees, on receipt of which the Deans shall cause their names to be struck from the registers of attendance, and such students cannot be readmitted to any class except on presentation of a special ticket, signed by the Bursar, certifying to the payment of fees.

3. Students registering after October 20th shall pay their fees at the time of registration, failing which they become subject to the provisions of regulation 2.

4. No fees will be refunded to partial students under any circumstances whatever.

MATRICULATION EXAMINATION FEES.

See pages 46 and 61.

FEES IN ARTS.

(*For Regulations re payment, see above.*)

Sessional fee for undergraduates and conditioned undergraduates	$58.00
Sessional fee for undergraduates and conditioned undergraduates in the School of Commerce	$58.00

(This includes fees for laboratories, library, gymnasium and graduation.)

At the request of the students themselves and by the authority of Corporation, an additional fee of $10.00 will be exacted from all men undergraduates and conditioned undergraduates, for the support of the Literary Society, the Undergraduates' Society, the Canadian Club, the Union, the McGill Daily and athletics. Women students pay an additional fee of $3.00 for athletics, and $2.50 for the Royal Victoria College Undergraduates' Society.

Fees for partial students—(first and second years).—$16.00 per session for one course† and $10.00 for one half-course† of lectures, including the use of the library; $12.00 per session for each additional course; $8.00 per session for each additional half-course. In addition there will be a fee of $3.00 for athletics.

Fees for partial students—(third and fourth years).—$22.00 per session for one course† and $13,00 for one half-course† of lectures, including the use of the library; $20.00 per session for each additional course; $11.00 per session for each additional half-course. In addition there will be a fee of $3.00 for athletics.

Partial students takjng the full curriculum in any one year pay the same fees as undergraduates in that year.

For fees payable by students taking the double course in Arts and Applied Science, see page 86; and for the fees payable by those in the double course in Arts and Medicine, see page 87.

Graduates in Arts of this University are allowed, on payment of one-half of the usual fees, to attend all lectures in the under-graduate course, except those for which a special fee is exigible. Graduates of other universities attending full courses in affiliated theological colleges are given the like privileg e.

For fees for Extension Courses, given in connection with the School of Commerce, see pages 159 to 163.

Special fees:—

Supplemental examination in any subject or any part of a subject, taken at the regular date fixed by the Faculty..... $ 2.00

Supplemental examination, when granted at any other time than the regular date fixed by the Faculty, for each examination period..... 5.00

All fees for supplemental examinations must be paid to the Bursar, and the receipts shown to the Dean before the examination.

Fee for the degree of B.A. or B.Sc. (Arts) conferred in absentia (except when the candidate has been specially exempted by the Faculty..... $20.00

Caution Money.—Every student is required to deposit with the Bursar the sum of $5.00, as caution money, to cover damages done to furniture, apparatus, books, etc. This amount, less deductions (if any), will be returned at the close of the session.

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†The lectures and laboratory work, if any, in one subject in any of the four college years constitute a "course," if occupying three hours per week; a "half-course," if occupying less than three hours per week.

FEES IN APPLIED SCIENCE.

(*For Regulations re payment, see page 84.*)

Sessional fee for the undergraduate course in Architecture.... $147.00
Sessional fee for all other undergraduate courses..... 197.00

Students taking the summer schools in September are required to pay the sum of $35 (including Caution Money Deposit), which will be placed to their credit on the fee for the session.

At the request of the students themselves, and by authority of Corporation, an additional fee of $10.00 will be exacted from all undergraduates and conditioned undergraduates for the support of the Literary Society, the Undergraduates' Society, the Canadian Club, the Union, the McGill Daily and athletics.

Graduates of this Faculty taking an additional undergraduate course will pay one-half of the graduate fee.

Students taking the six year double course in Arts and Applied Science shall pay full fees in Arts for the first three years of their course and the following fees in Applied Science:—

Sessional fee for second and third years of double course (summer school in September, see page 167)..... $ 50.00
Sessional fee for fourth, fifth and sixth years of double course... 197.00

The fees for partial students are:—$4.00 for library, $3.00 for athletics, $1.00 for the Undergraduates' Society, and a fee at the rate of $7.00 for an hour a week of instruction during the academic year, but the maximum fee shall in no case exceed the full undergraduate fee.

Caution Money.—Every student is required to deposit with the Bursar the sum of $10.00, as caution money, to cover damage done to furniture, apparatus, books, etc. This amount, less deductions (if any), will be returned at the close of the session.

Fee for the degree of B.Sc., conferred in absentia (except when the candidate has been specially exempted by the Faculty). $ 20.00

For a regular supplemental examination, the fee is $2.00 for each subject; for a special supplemental examination $5.00. These fees must be paid to the Bursar of the University and receipt for the same shown to the Examination Committee not later than the day before the examination.

FEES IN MEDICINE.

(*For Regulations re payment, see page* 84)

Sessional fee for the undergraduate course	$147.00
Fee for athletics, Union, etc.*	10.00
Caution money (deposit)†	10.00
	$167.00
Graduation fee for the degree of M.D., C.M.‡	$ 30.00

Double course students in Arts and Medicine, qualifying for the degrees B.A. or B.Sc. and M.D., shall pay full fees in Arts for two years and in Medicine for six. They shall also pay $30.00 as a graduation fee in the Faculty of Arts, as well as in Medicine.

Sessional fee for students repeating a session	$35.00
Repeating students must also pay $10.00 for athletics, etc., and make the usual caution money deposit of $10.00.	
Fee for students from other colleges who have paid full fees there for courses to be taken	$35.00

These students are also required to pay in addition, $10.00 for athletics, etc.,* the hospital fees exacted in the year to which they are admitted, and to make the usual caution money deposit of $10.00.

An *ad eundem* fee of $10.00 will be charged students entering from another university in any year above the first.

Partial students will be admitted on payment of special fees.

Fee for a supplemental examination	$ 5.00
Fee for the course in Public Health and diploma	100.00

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* At the request of the students themselves and by authority of Corporation, this additional fee of $10.00 is exacted from all men undergrad uates and conditioned undergraduates for the support of the Literary Society, the Undergraduates' Society, the Canadian Club, the Union, the McGill Daily, and athletics.

† The caution money deposit is intended to cover breakages in the dif ferent laboratories, etc. The amount of the deposit, less deductions (if any), will be returned at the close of the session.

‡When the degree is conferred in absentia an additional fee of twenty dollars will be exacted, unless the candidate has been specially exempted by the Faculty.

FEES IN DENTISTRY.

Students in Dentistry pay the following fees:—

Sessional fee	$125.00
Fee for athletics, the Union, etc.*	10.00
Caution money deposit†	10.00
	$145.00
Graduation fee for the degree of D.D.S.‡	$30.00

FEES IN PHARMACY.

Registration fee (payable in advance)	$ 5.00
Fee for athletics (payable in advance)	3.00
Course in Junior Chemistry	20.00
Course in Senior Chemistry	20.00
Course in Junior Materia Medica and Pharmacy	20.00
Course in Senior Materia Medica and Pharmacy	20.00
Course in Practical Pharmacy	20.00
Course in Botany	15.00

Certain fees are payable to the Pharmaceutical Association of the Province of Quebec for registration, examinations, and for the licentiate in pharmacy (see announcement of Department of Pharmacy.)

The fee of $10.00 for the Union, McGill Daily, etc., etc., is optional for students in Pharmacy, but they are required to pay the athletics fee of three dollars.

The sum of $5.00 is collected from all students of Pharmacy at the time of registration as "caution money," to cover breakages in the laboratories or lecture rooms. The balance will be refunded at the end of the session.

The University supplies all reagents and apparatus in the various laboratories. Charge is made for breakages only.

Partial students will be admitted to one or more courses on payment of special fees.

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* See foot note on preceding page.

†See foot note on preceding page.

‡See foot note on preceding page.

FEES IN LAW.

(For Regulations re payment, see page 84).

Registration fee	$ 5.00
Sessional fee for the undergraduate course	77.00
Fee for athletics, the Union, etc.*	10.00
Graduation fee‡	12.50
Fee for a Regular Supplemental Examination	2.00

Students taking the course leading to the degree of LL.B. shall pay full fees in Arts for the first two years and full fees in Law for the third and fourth years.

Fees for partial students:—

Registration fee	$ 5.00
For course in Roman Law	20.00
For each of the following courses: successions, criminal law, commercial law, obligations, civil procedure	15.00
For each of the shorter courses	10.00
Athletics fee	3.00

Caution Money—Every student is required to deposit with the Bursar the sum of $5.00, as caution money, to cover damage done to furniture, loss of books, etc. This amount, less deductions (if any), will be returned at the close of the session.

FEES IN THE GRADUATE SCHOOL.

For the resident course leading to the degree of M.A., M.Sc. or LL.M.	$40.00
Registration fee for the non-resident courses for M.A. or M.Sc.	15.00
Annual registration fee thereafter for these courses	5.00
For each year of the course leading to the degree of Ph.D	40.00
Graduation fee for M.A., M.Sc. or LL.M. (resident course)	20.00
" " " *(In absentia)*	40.00
" " Ph.D.	30.00
Fee for the degree of D.Sc.	80.00
" " " D.Litt	80.00
" " " D.C.L.	80.00

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* At the request of the students themselves and by authority of Corporation, this additional fee of $10.00 is exacted from all men undergraduates and conditioned undergraduates for the support of the Literary Society, the Undergraduates' Society, the Canadian Club, the Union, the McGill Daily, and athletics.

‡ When the degree is conferred in absentia an additional fee of twenty dollars will be exacted, unless the candidate has been specially exempted by the Faculty.

The examination and graduation fee is payable when the candidate presents himself for examination and is not returnable if he is unsuccessful. No thesis can be accepted unless it is accompanied by a receipt from the Bursar for this fee. If, however, a candidate for the degree of M.A. or M.Sc. fails he may present himself in a subsequent year without further payment of fees. A candidate for the degree of Ph.D., D.Sc. or D. Litt., in case of failure, may present himself in a subsequent year upon payment of an additional sum amounting to one-half of the usual fee for this degree.

Lecturers, tutors and demonstrators in the University who are proceeding to the degree of Master of Arts, Master of Science, or Doctor of Philosophy, shall, so long as they remain members of the teaching staff, be exempt from the tuition fee, but will be required to pay the fee for graduation in every case. In the event of their leaving the staff after one year of the course, they are required to pay a tuition fee of $20.00 in the M.A. or M.Sc. course and the prescribed fee in the Ph.D. course.

No fee shall be charged for the degree of LL.D., granted *honoris causa*.

FEES IN MUSIC.

Regular students, per session	$150.00

(This sum will also cover the fees for the diploma or degree examination at the end of each year.)

Senior partial students, per term of 12 weeks	$35.00
Junior partial students, per term of 12 weeks	28.00
Examination and graduation fee for Mus. Doc.	80.00

The fee for the degree of Mus. Doc. is payable in two instalments. Forty dollars must be paid when the candidate submits his exercise. If the exercise is not approved, he may in a subsequent year submit another exercise upon payment of $20.00. The second instalment of $40.00 must be paid before the subsequent examination. If the candidate be unsuccessful, he may in a subsequent year present himself again for examination upon payment of $20.00.

Information regarding fees to be paid by students for class work and by occasional students, as well as regarding fee for certificates and examinations, when these are not covered by the regular fee, will be found in the special syllabus issued by the Conservatorium of Music.

FEES IN THE SOCIAL SERVICE DEPARTMENT.

For the One-Year Certificate Course	$35.00
For a single sessional course	5.00
For a single term course	2.50

MISCELLANEOUS FEES.

Gymnasium for partial students, men (optional)	$2.50
Gymnasium for partial students of the Royal Victoria College (optional)	5.00
Certificate of standing (general)	1.00
Certificate of standing, accompanied by a statement of classification in the several subjects of examination	2.00

All applications for certificates must be addressed to the Registrar of the University, accompanied by the required fee.

No certificates are given for attendance on lectures unless the corresponding examinations have been passed.

MORALS AND DISCIPLINE.

1. University discipline shall be exercised by the several Faculties, and by the Committee on Morals and Discipline, subject in the cases hereinafter mentioned to revision or confirmation by Corporation.

2. Subject to the provisions of the following sections, each Faculty shall be entitled to exercise University discipline over its own students.

3. All cases of discipline involving the interests of more than one Faculty, or of the University in general, shall be dealt with by a standing committee of Corporation, to be known as the Committee on Morals and Discipline, which shall consist of the Vice-Principal, the Deans of the several Faculties, one member of the Board of Governors and another member of Corporation who must be outside of the University staff. The two members last named shall be appointed annually at the regular meeting of the Corporation in February. The Committee shall have power to add to their number the President and Vice-President of the Students' Council in cases in which that body has taken action and made a report.

4. All such cases of discipline as are referred to in sub-section 3 shall be reported to the Principal, or, in his absence, to the Vice-Principal, or, in the absence of both, to the senior Dean present in the city. If the Principal, or, as the case may be, the Vice-Principal or the Dean, deems action necessary the matter shall be reported to the Committee on Morals and Discipline. Corporation shall also have the power to report such matters to the said Committee.

5. When sentence of expulsion, or of suspension for more than three months, has been pronounced or recommended by a Faculty, or by the Committee on Morals and Discipline, the Corporation may entertain an appeal, which shall be final.

6. "University discipline" shall mean any appropriate method of exercising authority over students, and shall, but without prejudice to the foregoing generality, include the power of expulsion, suspension, disqualifying from competing for scholarships, exhibitions, medals, prizes or honours, imposing fines, not exceeding $25.00, on any student, levying assessments for damage done, reporting to parents or guardians and admonition.

7. Any student found guilty of immoral, dishonest, disorderly or improper conduct, or of wrongfully causing damage to person or property shall be liable to University discipline.

The following resolution should be noted here: "The Corporation of the University viewing with marked disfavour the organized kidnapping or other proceedings of a violent and objectionable character practised by the students of the First and Second Years at the beginning of the Session, hereby requires the student body to discontinue such practices under severe penalties."

8. If on an occasion of general disorder on the part of a year, class, or group of students, damage be done to University property, or acts committed meriting discipline, and the individuals who have done such damage, or committed such acts, have not been discovered, an assessment to cover the damage may be laid, or a fine imposed, or both, on all the members of such year, class or group.

9. While in College, or in the college grounds, students shall conduct themselves in the same orderly manner as in the class-rooms. Smoking is prohibited in the college buildings, except in such rooms, if any, as may be set apart for that purpose. Any professor observing improper conduct on the part of the student in the college buildings or grounds may admonish him, and, if necessary, report him to the Dean or the Faculty in which he is enrolled. Without, as well as within the walls of the college, every student is required to maintain a good moral character.

COLLEGE GROUNDS AND ATHLETICS.

1. The management of the college grounds and of out-door athletics and sports is under the control of the Athletics Committee of Corporation. This Committee is responsible for the general maintenance of all University grounds and retains the ultimate authority and power of supervision in all matters affecting athletics in the University. All matters which may in any way affect athletics must be referred to this Committee and its approval must be obtained before any departure is made from the authorized routine.

All students entering the University for the first time and all others desirous of taking part in football matches, or otherwise engaging in violent athletic contests, must pass a medical examination to be held under the direction of the Medical Director of Physical Education during the month of October. A complete record of all such examinations shall be kept by the Director or some other officer appointed to this duty. The managers and captains of clubs, or other responsible executive officers, are required to insist upon the strict observance of the rule in regard to medical examination, and all the rules and regulations of the Committee which concern them.

All clubs must submit their regulations, rules, and by-laws, and any changes in the same, for the approval of the Committee. They must make application for the use of such portions of the grounds as they require, and for any special privileges.

Clubs must not engage in matches with outside clubs, except with the approval of the Committee.

During the session, and including the Christmas holidays, all teams and individual students desiring to participate in outside athletics* must first obtain a sanction from the Athletic Association, such sanction to be approved by the Athletics Committee of Corporation.

Students who participate in outside athletics without having received such sanction may be suspended from the University by the Athletics Committee of Corporation, if the consent of the Principal has been given, until Corporation shall meet to deal with the matter.

The Athletic Association must submit its programme for each year for the approval of the Committee.

All students in good standing who are taking a course of study held to be sufficient by a special committee of the Faculty in which they are

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* Outside athletics is interpreted to mean those athletics over which the Athletic Association of the University or the Canadian Intercollegiate Athletic Union does not have control.

enrolled will be allowed to take part in athletics, subject, however, to the general regulation regarding medical examination.

Suspension from lectures for any cause, or absence from more than one-eighth of the total number of lectures given in any course, as shown by the monthly reports furnished to the Dean of each Faculty by the several professors and lecturers, shall be considered as sufficient ground to disqualify a student for engaging in athletic contests.

All students of the University are required to pay a fee of three dollars ($3.00) for the use of the grounds (this is included in the general fee of $10.00 paid by undergraduates). The amount so paid is handed over to the Executive of the Students' Council (less about $800.00, which is expended in the upkeep of the grounds in connection with athletics), and is by this body expended in the interest of college athletics, under the general direction of the Athletics Committee of Corporation.

The amount derived as grounds and athletics fees from the students of the Royal Victoria College is placed at the disposal of the Committee in charge of the grounds, for expenditure in the interests of women-students,

The annual sports of the University are held on the third Friday of October in each year. The day is observed as a holiday.

The following extracts are made from the rules and regulations of the Committee, for the guidance of members of the University and the several athletic clubs and associations which are from time to time permitted to use the grounds:—

(1). During the summer season the Sherbrooke street gates shall be closed between 10 p,m. and 6 a.m. every day, and the University and McTavish street gates between 6 p.m. and 7 a.m. on week days and the whole day on Sunday.

(2). Such persons as are entitled to use the grounds shall be provided with tickets, renewable each year. Those entitled to tickets are the members of the University and prominent benefactors, and the families of Governors and Professors.

(3). The several clubs may be permitted to issue special tickets, entitling the holders to admission to the grounds for the purpose of viewing matches, or for other special occasions of public interest.

UNIVERSITY ATHLETIC ASSOCIATION.

All matters connected with athletics at the University are under the immediate supervision of the University Athletic Association, which in turn, is responsible to the "Athletics Committee of Corporations." The executive of the Athletic Association consists of the presidents of the various clubs of the Association, twelve in number.

The Track Club is entrusted with the regulation and encouragement of "track and field athletics"; the management of the Inter-class sports and of the annual University sports.

The Rugby Football Club is represented by a senior and intermediate team in the Intercollegiate Union, and a junior team in the Q.R.F.U. In

addition to these championship matches, a series of inter-class matches is played annually for the "Wood Cup."

The Skating and Hockey Club has a well-established reputation. The Hockey Club is represented by senior and intermediate teams in the Inter-collegiate League. As in football, a series of inter-class games is played annually, in this case for the "Capper-Porter Trophy."

The Association Football Club, the Basket-Ball Club, the Boxing Club, the Cricket Club, the Harriers' Club, the Lawn Tennis Club, the Wrestling Club, the Fencing Club, the Polo Club, and the Swimming Club are the remaining clubs under the Association. Most of them conduct inter-class matches, and have a senior team, which represents the University in outside matches. The Association Football, Basket-Ball, Boxing and Wrestling Clubs, and the Tennis and Swimming Clubs are also represented in Inter-collegiate Unions.

PHYSICAL EDUCATION.

For particulars, see page 269.

ACADEMIC DRESS.

Professors, lecturers and students are required to wear academic dress at lectures, except in those cases in which a dispensation shall have been granted by the Faculty.

Undergraduates shall wear a plain black stuff gown, not falling below the knee, with round sleeve cut above elbow.

Bachelor of Arts.—Black stuff gown, falling below knee, with full sleeve cut to elbow and terminating in a point (similar to that of the Cambridge B.A.); hood, black silk, lined with pale blue silk and edged with white fur.

Bachelor of Science.—The same gown as Bachelors of Arts; hood, black silk, lined with yellow silk and edged with white fur.

Bachelor of Science in Agriculture.—The same gown as Bachelors of Arts; hood, black silk, lined with dark green silk and edged with white fur.

Bachelors of Civil Law.—The same gown as Bachelors of Arts; hood, black silk, lined with French grey silk and edged with white fur.

Bachelor of Laws.—The same gown as Bachelors of Arts; hood, black silk, lined with scarlet silk and edged with white fur.

Bachelor of Architecture.—The same gown as Bachelors of Arts; hood, black silk, lined with white silk and edged with white fur.

Bachelor of Music.—The same gown as Bachelors of Arts; hood, black silk, lined with pale mauve silk and edged with white fur.

Master of Arts.—Black gown of stuff or silk, falling below knee, with long sleeve with semi-circular cut at the bottom (similar to that of the Cambridge M.A.); hood, black silk, lined with pale blue silk.

Master of Science.—The same gown as Master of Arts; hood, black silk, lined with yellow silk.

Master of Laws.—The same gown as Masters of Arts; hood, black silk, lined with scarlet silk.

Doctor of Medicine.—The same gown as Masters of Arts; hood, scarlet cloth, lined with dark blue silk.

Doctor of Dental Surgery.—The same gown as Masters of Arts; hood, scarlet cloth, lined with pink silk.

Doctor of Laws.—The same gown as Masters of Arts; hood, scarlet cloth, lined with white silk.

Doctor of Literature.—The same gown as Masters of Arts; hood, scarlet cloth, lined with pale blue silk.

Doctor of Science.—The same gown as Masters of Art; hood, scarlet cloth, lined with yellow silk.

Doctor of Civil Law.—The same gown as Masters of Arts; hood, scarlet cloth, lined with French grey silk.

Doctor of Music.—The same gown as Masters of Arts; hood, scarlet cloth, lined with pale mauve silk.

Doctor of Philosophy.—The same gown as Masters of Arts; hood, scarlet cloth, lined with pale green silk.

Doctors of Laws, Doctors of Civil Law, Doctors of Literature, Doctors of Science, Doctors of Philosophy and Doctors of Music shall be entitled to wear for full dress a robe of scarlet cloth (similar in pattern to that of the Cambridge LL.D.), faced with silk of the same colour as the lining of their respective hoods.

All hoods shall be in pattern similar to that of the masters of Arts of Cambridge University.

Undergraduates and graduates shall wear the ordinary black trencher with black tassel, but Doctors of Laws, Doctors of Civil Law, Doctors of Literature, Doctors of Science, Doctors of Philosophy and Doctors of Music shall wear for full dress a black velvet hat with gold cord, similar to that worn by Doctors of Laws of Cambridge University.

Samples of the colours of the linings of all hoods shall be kept for inspection in the office of the Registrar.

FACULTY OF ARTS.

COURSES FOR THE DEGREE OF B.A.

Students may enter the Undergraduate Course by passing either the Junior or the Senior Matriculation Examination. In the former case, in order to obtain the degree of B.A. or B.Sc., they are required to attend regularly the prescribed courses of lectures for four years; in the latter, for three. No course or courses can be counted towards a degree or diploma in the Faculty of Arts except such as have been taken and passed after matriculation requirements have been satisfied and according to the regulations governing the various years of the Undergraduate Course. Undergraduates are arranged in years, from first to fourth, according to their academic standing. The respective conditions of passing into the last three years of the course are stated on page 109.

An undergraduate may proceed to the degree of B.A. by taking either the Ordinary Course or some one of the Honour Courses prescribed.

1. ORDINARY COURSE FOR THE DEGREE OF B.A.

First Year.

Greek 1 or 2, *or* **Latin 1.**
English 1 and 2.
History 1.
Mathematics 1 *or* **2.**
Latin 1, *or* **Greek 1** *or* **2,** *or* **French 1,** *or* **German 1** (a) *or* **2.**
Physics 1.

Details of the work in each subject are given on pages 113 to 140.

French cannot be taken as a qualifying option in the first year, except by students who have passed the matriculation examination in that subject, or, failing this, are able to satisfy the Head of the Department that they are qualified to proceed with the course.

German may be taken instead of trigonometry, in addition to two other foreign languages, by students who intend to read for honours in modern languages or English. Greek may be taken instead of trigonometry, in addition to two other foreign languages, by students who intend to read for classical honours, or by theological students. This option, will, however, be granted only on the recommendation of the departments concerned.

Application to take additional courses must be made to the Dean at the beginning of the session.

Advanced Courses.—A student qualified to take work of a more advanced character than the ordinary course of the first year in any subject, shall, with the consent of the B.A. Advisory Committee, take such

advanced work in that subject as the department concerned may recommend. Students taking advanced courses may be excused from the corresponding ordinary courses on the recommendation of the department.

Commercial Course.—An outline of the first year course for the degree of Bachelor of Commerce will be found on page 148

Second Year

Compulsory.

English 3.
Greek 3 *or* **4.**
Latin 2. } any one.

Optional Courses.

From the following subjects any three, or three and a half, in wholes or halves must be selected. For the degree of B.A. two and a half courses must be taken from Group II, but not more than two full courses can be selected from this Group in the Second Year. The subjects of Group II are not compulsory for students intending to take honours in the Third and Fourth Years. The asterisk denotes a half course.

GROUP I.		*GROUP II.*	
COURSES.	PREREQUISITES.	COURSES.	PREREQUISITE
Economics *1		**Botany** *2	
English 4	1 *and* 2	**Chemistry** 1	
French 3	1	**Geology** 1	
German 4	1 *or* 2	**Physics** 2	1
Greek 3 *or* 4	1 *or* 2	**Zoology** *2	
History *2	1	**Zoology** *6	2
Latin 2	1		
Mathematics 3	1		
Philosophy *1, *2, *3 — any two			
Semitic Languages 1			

An exemption from any one of the subjects specified above, except English composition, may be granted to honour students in mathematics who take both the ordinary and the advanced course in mathematics, but to no others.

Commercial Course.—An outline of the second year course for the degree of Bachelor of Commerce will be found on page 148.

Third and Fourth Years.

Four courses are to be selected in each year. Of the eight, six must be chosen from Group I, and of these six, five must be chosen in one department, or from courses which are indicated as allied to that department, but not less than three and not more than four courses can be taken in any one **department and not more than three courses in any one** department in the same year. In the whole B. A. course, at least two and a half courses are to be taken from Group II. No course can be selected unless the prerequisite courses, if any, have already been taken. An asterisk denotes a half course.

GROUP I.

Department.	Courses Offered.	Prerequisites.	Allied Courses
Classics	Latin 3,4,5,6	Latin 2	Any one full course in any other department of Group I.
	Greek 5,6,7,8	Greek 3 or 4	
Economics and Political Science	*1		English Literature, but not more than one full course; History, but not more than one full course.
	2	*1	
	3		
	*4,*5,*6,*7,*8, *9,*10,*11,*12	1 or 2	
Education	*1, *2		
English	4, *5, *6, *7, *13, *15, *19, *14	3	Any ancient or modern language, but not more than two full courses; History, but not more than one full course. Philosophy or Economics and Political Science, but not more than one full course.
		*13	
	*9, *10,*11, *12, *16, *20,	*5,*6, 7, *15, *19, any two.	
History	*2, *5, *7, 9.	1	Economics and Political Science, but not more than one full course; English, but not more than one full course.

GROUP I—Continued

Department.	Courses Offered.	Prerequisites.	Allied Courses.
Mathematics	3	1 *or* 2	Any two full courses in any department of Group I.
	4, *6, (*5 and 12), 7	3 4	
Modern Languages	French 6,7,8,9, German 5,6,7,8	French 3 German 4	Any language or languages, Philosophy, or History, but not more than two full courses.
Philosophy	*1,*2,*3, *4		Classics, Modern Languages, Education, Economics and Political Science, but not more than two full courses.
	*5	4	
	*6	*1, *2, *3 any two.	
	7,*8,9,11,*12	*1 and *2	
	*10	7	
	*13	*1, *2, *3 any two	
		and 4	Classics, History, Philosophy, but not more than two full courses.
Semitic Languages	2 *or* 3 or6	1	
	4 *or* 5	2 *or* 3 *or* 6	

GROUP II.

(Science Subjects.)

Department.	Courses Offered.	Prerequisite.
Biology	Botany *2	
	4, *5	*2
	7	4
	Zoology *2	
	3, *6	*2
	5	3
Chemistry	1	
	2	1
	3	2
Geology	1	
	*2, (*3 and 4)	1
	2	1
	3	2
Physics	10	3

GROUP III.

(Subjects taught in other Faculties.)

FACULTY.	COURSES OFFERED.	PREREQUISITE.
Law	Jurisprudence	
	Legal History	
	Roman Law	

No selection of courses can be made that conflicts with the time-table (see page 141).

Every undergraduate shall, on entering the Third Year, register in the Office of the Dean a statement of the work he intends to take during the remainder of his undergraduate course. Subsequent changes can be made only with the approval of the Dean.

Details of the work in each subject are given on pages 113 to 140.

For regulations whereby the double course in Arts and Applied Science can be taken in six years or Arts and Medicine in eight, see pages 110 and 111.

SUMMER READINGS.

(*For students entering the Second, Third and Fourth Years.*)

Summer readings are obligatory for every undergraduate, and conditioned undergraduate in the Faculty.

The readings prescribed for the session 1919-20 are posted on the notice boards of the Arts Building and the Royal Victoria College.

The summer readings for honour students may, with the approval of the Dean, be prescribed by the department concerned.

Students will be required at the beginning of the session (Thursday, October 2nd, p.m.) to pass an oral examination in each of the books selected by them.

Students who fail to do this must, before the end of the first term, take a written examination; failure to pass this examination involves the same penalties as failure in one subject in the sessional examinations.

II. HONOUR COURSES FOR THE DEGREE OF B.A.

Honours of the first, second or third class will be awarded in any of the following Honour courses:—

Biology.
Chemistry.
Chemistry and Biology.
Classics.
Economics and Political Science.
English.
English and French.
English and German.
English and Philosophy.
Geology and Minerology.
Greek and English.
Greek and Hebrew
History.
History and English.
Latin and English.
Latin and French.
Latin and German.
Mathematics and Physics.
Modern Languages.
Philosophy and German.
Philosophy and Psychology.
Semitic Languages.

Honour lectures are open to candidates for the ordinary degree in the third and fourth years, on the recommendation of the department concerned and with the approval of the Dean.

No student is allowed to take more than one Honour course.

A student who has failed to obtain honours in the third year may, on the recommendation of the department, be permitted to enter the ordinary course of the fourth year.

COURSES FOR THE DEGREE OF B.Sc. (Arts).

An undergraduate may proceed to the degree of B.Sc. (Arts) by taking either one of the two Ordinary Courses or an Honour Course.

1. ORDINARY COURSE.

There are two Ordinary Courses, designated respectively A and B.

Ordinary Course A.

This course has been arranged to give students a thorough training in science as a preliminary to entering a technical business or profession, or for teaching.

First Year.

Chemistry 1.
English 1 and 2.
French 2.
German 1 (b) *or* **3.**
Mathematics 1.
Physics 1.

Special arrangements will be made for students who have passed the matriculation examination in German.

Details of the work in each subject are given on pages 113 to 140.

SELECTION OF COURSES.

Second Year.—In addition to English Composition, which is compulsory, three subjects must be chosen, of which two must be selected from Group I below; the third subject may be taken from Group I or Group II. *Third and Fourth Years.*—The three subjects selected in the second year must be continued in the third and fourth years. If biology, however, which consists of a half-course in botany and a half-course in zoology, is chosen in the second year, it may be followed in the third and fourth years by a full course in each of those subjects, in which case one of the science subjects chosen in the second year need not be continued.

GROUP I.

SUBJECTS.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
Biology	Zoology 2. Botany 2.	Zoology 3, *or* 5; *or* Botany 7.	Botany 7; *or* Zoology 3 *or* 5.
Chemistry.	2 *or* 3; and 4.	2 *or* 3 and 9.	5 *or* 6; and 8.
Geology.	1.	5 and 6.	2, 3, 4.
Mathematics.	3.	4 and 5.	7.
Physics.	2 *or* 3.	2 *or* 3 and 4 *or* 7.	10, 12, 13.

GROUP II.

SUBJECTS.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
Economics and Political Science.	2 *or* 3.	Any two of:—Economics and Political Science 4 to 12.	Any two of Economics and Political Science, 4 to 12, not chosen in the third year.
English	3 and 4.	Any two of:—5, 6, 7, 15, 19.	Any two, not taken in the third year. of 5, 6, 7, 9, 10, 11 12, 15, 19.
History.	9; or 5 and 7.	9; *or* 5 and 7 (whichever has not been taken in the second year.).	9.
Philosophy.	Any two of:—1, 2, 3.	4 *or* 7 *or* 11 *or* any two of:—6, 8, 12, 13.	4 or 7 or 11 (whichever 3 has not been taken in the third year) *or* 9 or any two of:—5, 6, 8, 10, 12, 13.

Students who so desire may on application be permitted to substitute Education in either the third or fourth year for one course in Group II.

Students selecting Physics, as one of the three subjects of the ordinary B.Sc. course, must also elect Mathematics.

Ordinary Course B.

DOUBLE COURSE B.Sc., M.D.

This course in the physical and biological sciences is especially devised for students who might wish to proceed to a degree in Medicine or to advanced work in physiology, biological chemistry, pharmacology or allied subjects. Students intending to enter the Faculty of Medicine must pass the matriculation examination in Latin before admission to the third year of the B.Sc. course.

Graduates in this course are qualified to enter the third year in the Faculty of Medicine.

First Year.

English 1 and 2.
German 1 (b) *or* 3.
Mathematics 1.
Physics 1.
Chemistry 1.
French 2.

Second Year.

English Composition 3.
Physics 2 and 3.
Biology (Botany 1, Zoology 1).
Chemistry 3.

Third Year.

Chemistry 2 and 4.
Zoology 5.
Anatomy (as in first year Medicine).

Fourth Year.

Chemistry 7 and 10.
Anatomy (as in second year Medicine or Special Advanced Biology)
Physiology (as in second year Medicine).

II. HONOUR COURSE FOR THE DEGREE OF B.SC.

Students proposing to take an Honour Course must select one principal subject from Group 1 (page 105), in which subject they must have obtained at least high Second Class standing in the First Year; if the subject chosen for honours is not offered in the First Year, an aggregate standing of high second class must be obtained in all subjects of the First Year.

Students who fail to retain their honour standing, will be required either to repeat the year in honours or to proceed to the following year, reverting to the ordinary course, in which case they must take the ordinary work of the honour subject, together with two of the following subjects:—Mathematics, Physics, Chemistry.

The exact courses of study will be specified by the department concerned. All students will be required to take a course in German 3, and English 3.

B.Sc. IN AGRICULTURE.

Particulars regarding the course for the degree of Bachelor of Science in Agriculture, the first two years of which are taken in the Faculty of Arts, are given in the Macdonald College Announcement.

DEGREE OF BACHELOR OF HOUSEHOLD SCIENCE (B.H.S.).

The first two years are to be taken in the Faculty of Arts, McGill University and the last two in the School of Household Science, Macdonald College.

Proposed subjects to be taken in the Faculty of Arts, which may be either in the B.A. or the B.Sc. Course.

First Year (B.A Course).

Greek 1 *or* **2,** *or* **Latin 1.**
English 1 and 2.
History 1.
Mathematics 1 *or* **2.**
Latin 1, *or* **Greek 1** *or* **2,** *or* **French 1,** *or* **German 1** (a) *or* **2,**
Physics 1.

French is strongly recommended as the alternative language.

Second Year (B.A. Course).

English 3.
Latin 2 *or* **Greek 3** *or* **4.** } Compulsory.

For the remaining three, or three and a half courses, the following are required:

Botany 2.
Chemistry 1.
Zoology 2.
English 4 *or* **French 3,** with the remaining possible half course at the choice of the student from **Economics 1** *or* **History 2** *or* **Philosophy 1** *or* **2** *or* **3.**

First Year (B.Sc. Course).

Chemistry 1.
English 1 and 2.
French 2.
German 1 (b) *or* **3.**
Mathematics 1.
Physics 1.

Second Year (B.Sc. Course).

English 3.

Biology:—Botany 2, Zoology 2.

Chemistry 2; and one course from among the following:—**Geology 1; Mathematics 3; Physics 2 and 3; Economics and Political Science 2** *or* **3; English 4; History 3** *or* **5 and 7; Philosophy, any two of 1, 2, 3.**

Proposed subjects to be taken in the School of Household Science at Macdonald College.

Third Year.

Economics (1 hour).
English (2 hours).
Principles of Teaching (1 hour—half-year).
Bacteriology (1 hour lecture, 2 laboratory periods—half-year).
Biology (1 hour lecture, 1 laboratory period).
Chemistry (1 hour lecture, 2 laboratory periods).
Foods (2 hours lecture, 2 laboratory periods).
The Home (1 hour lecture, 1 laboratory period).
Textiles and Clothing (3 hours—half-year).

Fourth Year.

English (2 hours).
Principles of Teaching (2 hours lecture—practice teaching).
Bacteriology (2 hours lecture, 1 laboratory period).
Chemistry (2 hours lecture, 2 laboratory periods).
Physics (3 hours—half-year).
Foods (2 hours lecture, 2 laboratory periods).
The Home (2 hours).

PARTIAL STUDENTS.

Students desiring to take a Partial Course in Arts are required to pass the matriculation examination in the subject or subjects which they intend to study, or, failing this, they must satisfy the Head of the Department as to their ability to follow the course. Subject to the above limitations, lectures are open to Partial Students in both Honour and Ordinary Courses, but no course or courses taken by such students can count for a degree. Medals, scholarships, exhibitions and prizes shall not be awarded to Partial Students. A certificate of standing can be obtained from the Dean if requested. A partial student who fails in any subject at the First Term Examinations shall be allowed to continue that subject only on the recommendation of the Head of the Department concerned.

EXAMINATIONS IN ARTS.

There are two examinations in each session, the Intermediate and the Final. Intermediate Examinations are held either at the end of the first term, or at such intervals during the session as each department may pre-

scribe. In the second, third and fourth years, Intermediate Examinations will be held or not, as may be determined by each department.

Students prevented by illness from attending the Intermediate Examinations will, on presenting a medical certificate to the Dean, be given sessional standing on the results of the Final Examination.

Undergraduates and conditioned undergraduates of the first year who fail in more than three subjects at the Intermediate Examinations will be allowed to attend not more than three full courses in the second term, for each of which they must obtain the permission of the Dean.

Seventy-five per cent. of the marks given for the sessional work in each subject will be assigned to the Final Examination.

Successful students are arranged in three classes.

Mid-term examinations for first year students will be held in November. Absence from a mid-term examination will be excused only on presentation of a medical certificate. Failure to comply will mean loss of the year.

First Class General Standing at Graduation.—For an Ordinary B.A. degree of the first class, a candidate shall obtain first class standing in at least four of the eight subjects taken in the third and fourth years and not lower than second class in the remainder.

SUPPLEMENTAL EXAMINATIONS.

Examinations supplemental to final examinations are held in the month of September simultaneously with the matriculation examination. The date of the supplemental examinations will be fixed by the Faculty, and no examinaton will be granted at any other time, except by special permission of the Faculty, and on payment of a fee of five dollars.

ADVANCEMENT FROM YEAR TO YEAR.

Advancement to the Second Year.—A student may proceed to the second year with any one full course of the first year (or its equivalent) unpassed.

Advancement to the Third Year.—A student may proceed to the third year with any one full course (or its equivalent) unpassed, unless that full course (or any part of it) belongs to the first year.

Advancement to the Fourth Year.—A student may proceed to the fourth year with any one full course (or its equivalent) unpassed, unless that full course (or its equivalent) is compulsory in the second year.

Repeating a Year.—By special permission of the Faculty, a student who is required to repeat a year may, on application:

(a) Be exempted from attending lectures and passing examinations in the subjects in which he has already passed;

(b) Be permitted to take, in addition to the subjects in which he has failed, one of the subjects of the following year in his course.

N.B.—The choice of subjects must involve no conflict of hours as printed in the time-table.

DOUBLE COURSES.

ARTS AND APPLIED SCIENCE.

Candidates for the degree of B.A. and B.Sc. (Applied Science) in six years will take the first three years in Arts only, before attending any regular courses in Applied Science, except the *Summer Courses*. They will then enter the Faculty of Applied Science and devote the remaining three years entirely to the work of that Faculty.

The summer courses (see page 167) are necessary in order to overtake the work in descriptive geometry, drawing and shopwork, which form part of the regular curriculum of the first year in Applied Science. These summer courses must be taken for two periods of one month each (in successive Septembers), after the completion of the regular session of the first and second years in the Faculty of Arts, respectively, and must not be taken during the regular session in any of the three years assigned to that Faculty.

Students who intend to take the double course in Arts and Applied Science must notify the Dean of the Faculty of Applied Science to that effect at or before the close of their first year in Arts (May 1st), and must, before the first of September following, pay the fee of $50.00 to the Bursar, for the first of their summer courses.

The requirements for each of the three years in the Faculty of Arts are as follows:—

First Year.

The curriculum as laid down for the B.A. degree, except that a modern language must be taken. It is recommended that mathematics 2 be taken instead of mathematics 1.

Second Year.

English 3.

French 3 *or* **German 4.**

German 4, *or* **French 3,** *or* **English 4,** *or* **Economics and Political Science 1, and History 2,** *or* **Philosophy, any two of:—1, 2 and 3.**

Latin 2, *or* **Greek 3** *or* **4.**

Mathematics 3 and 5 and 6 (students who have taken 2 may substitute 4 for 3).

Third Year.

Physics 2.

Any three of the following:—

English, any two of 5, 6, 7, 15, 19; Latin 3; French 6 *or* **7; German 5** *or* **6; Philosophy 4** *or* **7** *or* **11** *or* **any two of 6, 8, 12; History 9** *or* **5 and 7; Economics and Political Science 2, 3.**

The degree of B.A. will be conferred on double course students in Arts and Applied Science on the completion of the prescribed curriculum in Arts and the requirements of the second year in Applied Science.

ARTS AND MEDICINE.

There are two double courses in the Faculties of Arts and Medicine, leading to the degrees of B.A., M.D., and B.A., D.D.S., respectively.

I. B.A., M.D.

The degrees of B.A. and M.D. may be obtained in eight years, of which the first two shall be taken in the Faculty of Arts, and the remaining six in the Faculty of Medicine. The course in Arts is as follows:—

First Year.

English 1 and 2.
History 1.
Mathematics 1 *or* **2.**
Latin 1 *or* **Greek 1** *or* **2.**
Any two additional languages.

Second Year.

English Composition 3.
Latin 2.
Any three of the following:
Economics and Political Science 1, and History 2.
English 4.
French 3.
German 4.
Hebrew 1.
Greek 3 *or* **4** *or* **Latin 2.**
Philosophy, any two of:—1, 2, 3.
Mathematics 3.

In the double course for the degrees of B.A., M.D., the degree of B.A. will be conferred on the completion of the above curriculum in Arts and of the second year in Medicine.

For the requirements of the B.Sc. course for students proceeding to the Faculty of Medicine, see page 106.

II. B.A., D.D.S.

The degrees of B.A. and D.D.S. may be obtained in six years, of which the first two shall be taken in the Faculty of Arts and the remaining four in the Department of Dentistry in the Faculty of Medicine. The course in Arts is the same as that prescribed for the double course of B.A., M.D. (see I, above).

B. COM. AND B.A.

Graduates in Commerce who desire to obtain the degree of B.A. may be admitted to the Third Year in Arts provided that at some time before entering Third Year Arts they shall have taken Latin 1 and 2 of the B.A. curriculum.

ARTS AND THEOLOGY.

Students who are pursuing a double course in Arts and Divinity (six years at least) will take in the third and fourth years the courses which constitute the ordinary curriculum in Arts, less a half course in each of these years, or a whole course in either.

COURSES OF LECTURES IN ARTS.

The hours of the ordinary lectures only are indicated; the hours for honour lectures will be arranged by the several departments at the opening of the session.

DEPARTMENT OF BOTANY.

PROFESSOR:—FRANCIS ERNEST LLOYD.
PROFESSOR OF MORPHOLOGICAL BOTANY:—CARRIE M. DERICK.

1. **General Biology.**
   As in first year Medicine.....Professor Lloyd, Dr. Jackson.

2. **Elements of Botany.**
   2 hrs. 2nd term; Mon., Wed., at 10....4 hrs. lab.; Sat., 9 to 1.
   Professor Lloyd or Professor Derick.
   Prerequisite for all courses except 3, and also with Zoology for Honours in Biology.

3. **Classification of the Pteridophyta and Spermatophyta.**
   Eight lectures (optional). 2nd Term (Mar.–Apr.)
   Professor Lloyd or Professor Derick.

4. **Comparative Plant Morphology.**
   2 hrs. sess.; Tu., Fri., at 10....6 hrs. lab.....Professor Derick

5. **Variation, Heredity and Evolution.**
   2 hrs. sess.; Tu., Fri., at 11.....Professor Derick.

6. **Histology and Anatomy.**
   2 hrs. sess.....4 hrs. lab.....Professor Lloyd.

7. **Elementary Plant Physiology.**
   2 hrs. sess.....6 hrs. lab.....Professor Lloyd.

8. **Algae of Water Supplies; Plant Pathology.**
   2 hrs. sess.....6 hrs. lab.....Professor Derick.

HONOUR COURSE IN BIOLOGY.

Prerequisites: Botany 2, Chemistry 1, Zoology 2.
Third Year: Botany 4 and 6; Zoology 3 and 4.
Fourth Year: Botany 7 and 8; Zoology 5 and 6.

GRADUATE COURSE.

Prerequisites: Botany 2 to 8; Chemistry 1; Zoology 2; or equivalent courses taken elsewhere.

Special courses to meet the needs of students who may be preparing for particular vocations can usually be arranged for on consultation with the Professor.

DEPARTMENT OF CHEMISTRY.

PROFESSOR:—R. F. RUTTAN.

ASSOCIATE PROFESSORS:—N. N. EVANS. V. J. HARDING.

ASSISTANT PROFESSORS:—V. K. KRIEBLE. F. W. SKIRROW.

LECTURERS:—A. R. MACLEAN. OTTO MAASS.

DEMONSTRATORS:—G. S. WHITBY. E. G. YOUNG. O. W. HERZBERG. JOHN RUSSELL. C. GREAVES. W. McG. MITCHELL.

(Unless otherwise specified, all lectures and laboratory courses are given in the Chemistry Building.)

1. General Chemistry.

3 hrs. sess.; Mon., Tu., Th., at 2...
Professors Ruttan and Skirrow.

4 hrs. lab., Mon., Thu., 3 to 5...
Dr. A. R. MacLean and Messrs. G. S. Whitby and O. W. Herzberg.

Text-books :—Alex. Smith, General Chemistry for Colleges, new edition.

2. Organic Chemistry.

3 hrs. 1st term; Mon., Wed., Fri., at 3.....Professor Ruttan (Old Medical Building.)

2 hrs. 2nd term; Tu., at 10, Th., at 12.....Assistant Professor Krieble.

6 hrs. lab., 2nd. term.....Dr. A. R. MacLean and Mr. Whitby.

Text-books :—Remsen or Perkin and Kipping.

3. Analytical Chemistry.

(a) QUALITATIVE ANALYSIS.

1 hr. 1st term; 9 hrs. lab.....Professor Evans and Mr. Russell.

Text-book :—Steiglitz, Qualitative Analysis.

(b) QUANTITATIVE ANALYSIS.

1 hr. 2nd term; 12 hrs. lab.....
Assistant Professor Skirrow and Mr. Greaves.

Text-book :—Cumming and Kay, Quantitative Analysis.

4. Elementary Physical Chemistry.

2 hrs. 1st term; Tu., at 10, Th., at 12.....Mr. Maass.
Text-book :—Walker, Introduction to Physical Chemistry.

5. Organic Chemistry (Advanced).

2 hrs. sess.; Tu., at 9 Fri., at 11...
Professor Ruttan and Professor V. J. Harding.
12 hrs. lab...
Professor Ruttan, Assistant Professor Krieble and Dr. MacLean, and Mr. Whitby.

6. Inorganic Chemistry (Advanced).

2 hrs. sess.; Wed. and Fri., at 10.....Assistant Professor Skirrow.

7. Physical Chemistry (Advanced).

2 hrs. sess.; Wed. and Fri., at 9.....Mr. Maass.
6 hrs. lab.; Mon. and Wed., 2 to 5.

8. Quantitative Analysis (Advanced).

1 hr. sess.....Assistant Professor Skirrow and Mr. Greaves.
12 hrs. lab.

9. Historical Chemistry.

1 hr., 2nd term.....Mr. Maass.

10. Biological Chemistry.

3 hrs. sess., 2nd. term; Mon., Wed., and Fri., at 3.....
(Old Medical Building.) Professor Ruttan.
6 hrs. lab., 2nd term; Wed. and Sat., 9 to 12.....
(Old Medical Building.)
Professor Ruttan, Professor Harding and Mr. Young.
Text-book :—Hawk's Practical Physiological Chemistry.

11. Biological Chemistry (Advanced).

5 hrs. lab., 2nd. term.....
(Old Medical Building.)
Professor Ruttan and Professor V. J. Harding.

12. Electro-Chemistry.

2. hrs., 1st term; Mon., at 9, Fri., at 12.....Mr. Maass.

13. Food Chemistry.

1 hr., 2nd term; Tu., at 11.....Dr. Ruttan.

14. Industrial Inorganic Chemistry.

2 hrs., 1st term; Wed. and Fri., at 11.....Prof. Evans.

15. Industrial Organic Chemistry.

2 hrs., 2nd term; Wed. and Fri., at 11.....Dr. Ruttan.

HONOUR COURSE IN CHEMISTRY.

Prerequisites: 1.

Third Year: 2, 3, 4; Physics 2; and a half-course in calculus or biology or geology or mineralogy or scientific German.

Fourth Year: (a) 5, 7, 9, 10 (11 optional), or, (b) 6, 7, 8, 9; Physics 3.

HONOUR COURSE IN CHEMISTRY AND BIOLOGY.

Second Year: Latin 2; English 3; Chemistry 1; Botany 2; Zoology 2; and either French 3, or German 4. *Third Year*: Either Physics 2 or French 7 or German 6 and Chemistry 2, 3 (a) and 10; Zoology 3; Botany 4 and 7. *Fourth Year*: A full course in physics or biology or advanced chemistry and Chemistry 3 (b), 11; Zoology 5 and 6; Botany 6.

DEPARTMENT OF CLASSICS.

PROFESSOR:—S. B. SLACK.
LECTURER:—A. M. THOMPSON.
SESSIONAL LECTURER AND TUTOR (ROYAL VICTORIA COLLEGE):—
ELIZABETH A. IRWIN.

Greek.

All students taking Greek are expected to provide themselves with a grammar, a Greek-English dictionary, a classical dictionary, and an Atlas of ancient geography. The following are recommended:—An Elementary Greek Grammar, Bryant and Lake (Oxford Univ. Press); *or* Goodwin's Greek Grammar (Ginn & Co.); Liddell and Scott's Greek Lexicon (abridged or intermediate); Classical Atlas (Everyman Series, Dent); Smith's Smaller Classical Dictionary (Everyman Series, Dent).

1. Beginners' Greek.

4 hrs. sess.; Mon., Tu., Th., Fri., at 3.....

Text-books:—White's First Greek Book (Ginn & Co.); Passages for Greek Translation (Peacock & Bell, Macmillan). Students who take the Beginners' Greek Course will be required to attend a continuation class during May and June, unless specially exempted.

2. Ordinary Greek.

4 hrs. sess.; Mon., Tu., Th., Fri., at 3.

Text-books:—Cebetis Tabula (Jerram, Clarendon Press); Euripides,

Heraclidae (Jerram, Oxford Univ. Press). *Composition*:—Greek Exercises, Bryant and Lake (Oxford Univ. Press) and Elementary Greek Grammar, Bryant and Lake (Oxford Univ. Press). *Translation at sight*:—Jerram Anglice Reddenda, First Series.

3. Greek.

4 hrs. sess.; Mon., Tu., Th., Fri., at 4.....

Summer reading:—Greek History for Schools, Edmonds, pp. 140-217 (Camb. Univ. Press).

Text-books:—Lysias, Epitaphios (Snell, Clarendon Press); Lucian Vera Historia Book II (Jerram, Clarendon Press). *Composition*:—North and Hillard, Greek Prose Composition (Rivingtons). *Translation at sight*:—As in 2. Prerequisite:—1.

4. Greek.

4 hrs. sess.; Mon., Tu., Th., Fri., at 4.....

Summer reading:—As in 3. *Texts*:—Xenophon, Memorabilia, Book I; Aeschylus, Prometheus Vinctus. *Composition*:—North and Hillard, Greek Prose Composition (Rivingtons). *Translation at sight*:—As in 2.

5. Greek Language and Literature.

4 hrs. sess.; Mon., Tues., Wed., Fri., at 11.....Professor Slack.

Texts:—Demosthenes, Philippic II, Chersonesus, Philippic III (Sandys, Macmillan); Homer Odyssey IX to XII (Merry, Clarendon Press). *Composition*:—As in 4; also Sidgwick, Introduction to Greek Prose Composition (Longmans). *Translation at sight*:—Florilegium Tironis Græcum (Macmillan & Co.). *Literature*:—A course of twelve lectures on some period of Greek history or literature or on some aspect of Greek life or thought.

6. For the Session 1920-1921. To be announced next year.

7. Greek.

4 hrs sess.; Mon., Tu., Wed., Th., at 9.....

Texts:—Thucydides VI; Euripides, Orestes (Wedd, Camb. Univ. Press). *Composition*:—Mackie, Parallel Passages (Macmillan & Co.); and from dictation. *Translation at sight*:—Models and Exercises in Unseen Translation, Fox and Bromley (Clarendon Press).

8. For the Session 1920-1921. To be announced next year.

HONOUR COURSE.

Prerequisites:—Greek 1 and 3, or 2.and 4. Third and Fourth Years: Greek 5 and 7. Honour Students will also do the following private readings: Third and Fourth Years, Sophocles Antigone; Fourth Year only, Aristophanes, Peace (Merry, Clarendon Press).

GRADUATE COURSES.

Suggested Subjects:—

1. The Phoenicians in Homer.
2. The Greek Pantheon.
3. The accounts of Egypt in Herodotus and other Greek writers.
4. Life and times of Demosthenes.
5. The position of Proclus in philosophy.

N.B. See note under Latin Graduate Courses.

Latin.

All students taking Latin are expected to provide themselves with a grammar, a Latin-English Dictionary, a classical Dictionary, and an Atlas of Ancient Geography. The following are recommended:—Sonnenschein, New Latin Grammar (Clarendon Press, 1912; N.B.—Note the exact title); Lewis, School Dictionary, *or* White, Junior Students' Latin-English Dictionary; "Everyman" Classical Atlas (Dent.); Smith, Smaller Classical Dictionary ("Everyman" Series, Dent.).

The following book is also recommended: Roman History Literature and Antiquities by A. Petrie (Oxford Univ. Press).

1. Latin.

4 hrs. sess.; Mon., Wed., Th., Fri., at 10 (Men).

4 hrs. sess.; Mon., Tu., Wed., Fri., at 11 (Women R.V.C.).

Text-books:—Virgil Aeneid VI; Extracts from Cicero, Walford, pp. 55-85 (Oxford Univ. Press). *Composition*:—North and Hillard, Latin Prose Composition (Rivingtons). *Translation at sight*:—Rivingtons' Class Books of Latin Unseens Book II. *Grammar*:—Sonnenschein, New Latin Grammar (Clarendon Press, 1912. N.B.—Note the exact title), pages 178-211.

Advanced Class:—See 7.

2. Latin.

4 hrs. sess.; Mon., Tu., Th., Fri., at 12 (Men); Mon., Tu., Th., Fri., 12 (Women, R.V.C.).

Texts:—Terence Phormio; Cicero First Verrine (Select Orations of Cicero, King, Clarendon Press); Horace Odes II. *Composition:*—Latin Prose Composition; Writing of Narrative Latin, by B. W. Mitchell (American Book Co.) *Translation at sight:*—Rivingtons' Class Books of Latin Unseens Book VII. *Grammar:*—Sonnenschein, New Latin Grammar (Clarendon Press, 1912. N.B.—Note the exact title), pages 123-178.

Advanced Class:—See 7.

3. Latin Language, Literature and History.

4 hrs. sess.; Mon., Wed., Th., Fri., at 10.....Professor Slack.

Lectures:—Texts: Cicero's Fifth Verrine (Peterson's Text, Clarendon

Press); Ovid (Elegiac Poems, Vol. I, The Earlier Poems, Pearce, Clarendon Press) pp. 30-72; Horace, Epistles II and Ars Poetica. *Composition:*—Continuous Latin Prose, Dakers (Rivingtons). *Translation at sight:*— Fowler Sportella (Longmans). *Literature:*—A course of twelve lectures on Roman history, antiquities, literature or religion.

4. For the Session 1920-1921. Subjects to be announced next year.

5. Latin.

4 hrs. sess.....Dr. Thompson.

Texts:—Catullus, (Oxford Texts, Clarendon Press); Plautus, Captives. *Composition:*—Nixon, Prose Extracts for Translation into English and Latin (Macmillan). *Translation at sight:*—Fox and Bromley, Models and Exercises in Unseen Translation (Clarendon Press).

6. For the Session 1920-1921. Subjects to be announced next year.

7. At the beginning of the second term, if not before, an Advanced Class will be formed to prepare for Second Year Exhibitions and Third Year Scholarships. This class will be open to qualified students of the first two years.....Professor Slack.

HONOUR COURSE.

Prerequisites:—Latin 1 and 2.

Third and Fourth Years:—Latin 3 and 5 and the following additional books for private reading: For Third and Fourth Years, Terence Andria; For Fourth Year only: Horace Odes III.

GRADUATE COURSES.

For students who wish to take the above the following subjects are suggested:—

1. Virgil as an Epic Poet.
2. The treatise ad Herennium.
3. Social Life of the Empire.
4. Latin poetry from the death of Terence to the death of Lucretius.
5. The History of the East, including Egypt, from 31 B.C. to 96 A.D.

N.B.: It is not likely that more than one of the ten subjects given under the headings Latin and Greek, can be taken up in the session 1919-1920. The list therefore is intended for the guidance of students, but precise details with regard to the books prescribed and the thesis are reserved for further discussion.

Comparative Philology.

1. Introductory Course.

2 hrs., 1st term.....Professor Slack.

2. Latin and Greek Historical Grammar.

2 hrs., 2nd term.....Professor Slack.

DEPARTMENT OF ECONOMICS AND POLITICAL SCIENCE.

PROFESSOR:—STEPHEN B. LEACOCK.
ASSOCIATE PROFESSOR:—J. C. HEMMEON.

1. Elements of Political Economy.
2 hrs. sess.; Mon., Fri., at 11.....Professor Leacock.

2. Principles of Economic Theory.
4 hrs. sess.; Mon., Tu., Wed., Fri., at 11.....Professor Hemmeon.

3. Principles of Political Science.
4 hrs. sess.; Mon., Tu., Th., Fri., at 2.....Professor Leacock.

4. Labour Problems.
4 hrs. 1st term; Mon., Tu., Wed., Fri., at 10.....Professor Hemmeon.
(Given in 1921-22.)

5. Money and Banking.
4 hrs. 2nd term; Mon., Tu., Th., Fri., at 3.....Professor Leacock.
(Given in 1921-22.)

6. Political Economy Prior to the Nineteenth Century.
4 hrs. 1st term; Mon., Tu., Wed., Fri., at 10.....Professor Hemmeon.
(Given in 1920-21.)

7. Political Economy in the Nineteenth Century.
4 hrs. 2nd term; Mon., Tu., Th., Fri., at 3.....Professor Leacock.
(Given in 1920-21.)

8. Economic Factors in the Development of Society.
4 hrs. 1st term; Mon., Tu., Wed., Fri., at 10.....Professor Hemmeon.
(Given in 1919-20.)

9. The Political and Social Theories of Modern Times.
4 hrs. 2nd term; Mon., Tu., Th., Fri., at 3.....Professor Leacock.
(Given in 1919-20.)

10. Canada:—Federal and Provincial Governments.
4 hrs. 1st term; Mon., Tu., Th., Fri., at 3.....Professor Leacock.

11. Public Finance.
4 hrs. 2nd term; Mon., Tu., Wed., Fri., at 10.....Professor Hemmeon.

12. Canada:—Industrial and Economic Problems.
2 hrs. sess.; Tu., Wed., at 9.....Professor Hemmeon.

HONOUR COURSE.

Prerequisite: No. 1. *Third Year:* Nos. 2 and 3, together with 4 and 5, or 6 and 7, or 8 and 9 (according to the year), and one approved course in History or French or Philosophy. *Fourth Year:* Nos. 4 and 5, or 6 and 7, or 8 and 9 (according to the year), and Nos. 10, 11, 12 and one half-course (approved) in History or French or Philosophy or Roman Law.

GRADUATE COURSE FOR M.A. DEGREE.

Prerequisites: Nos. 2, 3, 4 and 5; (or 6 and 7; or 8 and 9); 10, 11, or equivalent courses taken elsewhere. Resident study, one year, with at least eight lectures a week selected from (a) any courses among Nos. 4 to 12 (inclusive), not already taken, (b) any special courses offered from time to time, (c) any courses approved by the department, together with a thesis. Non-resident study: At least two years' work covering the same ground as above, with examinations, and a thesis.

EXHIBITIONS.

For exhibitions, see page 75.

DEPARTMENT OF EDUCATION.

PROFESSOR:—J. A. DALE.

DEAN OF THE SCHOOL FOR TEACHERS, MACDONALD COLLEGE, AND PROFESSOR OF EDUCATION:—SINCLAIR LAIRD.

(For the staff of the School for Teachers, see Officers of Instruction.)

1. Theory and Practice of Education.

2 hrs. sess.....Professor Dale.

A. First Term,
   (a) General Theory; Mon., at 5.
   (b) Modern History; Th., at 5.

B. Second Term.
   Contemporary Problems, Mon., Th., at 5.

2. History of Education:—Ancient and Medieval.

2 hrs. sess.; Wed., Fri., at 5.....Professor Dale.

1 and 2 are required for the First Class Academy Diploma of the Province of Quebec, together with (a) fifty-half-days of observation and practice, which can be taken partly in term time, and may be divided between the years; (b) a course in physical education qualifying for the Strathcona certificate B. This course is taken in the fourth year, before Christmas. See page 270.

GRADUATE COURSE.

3. Readings, Reports, Theses.

Professors Dale and Laird

TRAINING OF TEACHERS.

The University, through its Department of Education, undertakes the training of teachers in all grades required by the Province; and through the Teachers Training Committee offers training for specialists in certain subjects. See page 146.

DEPARTMENT OF ENGLISH.

PROFESSOR:—CHAS. E. MOYSE.

PROFESSOR OF COMPARATIVE LITERATURE AND ASSOCIATE PROFESSOR OF ENGLISH:—P. T. LAFLEUR.

ASSISTANT PROFESSORS:—CYRUS MACMILLAN. MURIEL B. CARR. G. W. LATHAM.

1. English Composition.

1 hr. sess.; Mon., at 12 (Men) ; Tu., at 9 (Women, R.V.C.).....Asst. Professor Latham.
Required of all first year undergraduates.

2. English Literature: General Course.

2 hrs. sess.; Tu., Th., at 12 (Men).....
Asst. Professors Macmillan and Carr.
Mon., Wed., at 9 (Women, R.V.C.).
Required of all first year undergraduates.

3. English Composition.

1 hr. sess.; Tu., at 3 (Men).....Asst. Professor Latham.
Tu., at 3 (Women, R.V.C.).....Asst. Professor Carr.
Required of all second year undergraduates.

4. English Prose From Bacon to Stevenson.

3 hrs. sess.; Mon., Th., Fri., at 3..... Professor Lafleur, Assistant Professors Macmillan, Carr and Latham.

5. Elizabethan Drama.

2 hrs. sess.; Mon., Th., at 4.....Professor Moyse.

6. Shakespere (Five Plays).

2 hrs. sess.; Tu., Th., at 11.....Asst. Professor Macmillan.

7. Poetry and the Drama From Dryden to Moore.

2 hrs. sess.; Tu., Th., at 10.....Assistant Professor Macmillan.

8. Argumentation and Debating.

2 hrs. sess.;....Asst. Prof. Latham and Asst. Professor Macmillan. (Omitted in 1919-20.)

9. Poets of the Nineteenth Century.

2 hrs. sess.; Tu., Friday, at 4....
Professor Lafleur and Asst. Professor Carr.

10. English Novelists, From Defoe to George Eliot.

2 hrs. sess.; Mon., Fri., at 11.....Professor Lafleur.

11. Pre-Shakesperian Drama.

2 hrs. sess.; Mon., Wed., at 12.....Assistant Professor Macmillan.

12. Methods of Literary Criticism.

2 hrs. sess.; Wed., Th., at 11.....Professor Lafleur.

13. Anglo-Saxon.

2 hrs. sess.; Tu. Fri., at 2.....Asst. Professor Latham.
Text-book :—Sweet, Anglo-Saxon Reader (all the prose).

14. Anglo-Saxon Poetry and Introduction to Germanic Philology.

2 hrs. sess.; Tu., Fri., at 3.....Professor Moyse.
Text-books :—Sweet, Anglo-Saxon Reader (all the verse); Wright, Old English Grammar (second edition); Wright, Primer of the Gothic Language.
Prerequisite:—13.

15. Chaucer and Milton.

2 hrs. sess.; Tu., Th., at 9.....Assistant Professor Carr.

16. Comparative Literature.

The influence of English literature upon the continent of Europe, chiefly during the 18th and 19th centuries.
2 hrs. sess.; Mon., Fri., at 10.....Professor Lafleur.

17. Comparative Methods in Literary Study.

The literary relations between the continent of Europe and England through the works of leading French, German, Spanish and Italian writers, beginning with Montaigne.
2 hrs. sess.; Mon., Fri., at 10.....
Assistant Professors Macmillan and Latham.

18 Prose from Dryden to Burke.

1 hr. sess.....Professor Lafleur.

19. American and Canadian Literature.

2 hr. sess..... Assistant Professors MacMillan and Latham.

20. Tennyson and Later Victorian Poets.

2 hr. sess.; Tu., Th., at 12.....Professor Moyse.

HONOUR COURSE.

Prerequisite:—4.

Third Year:—5, 6, 7, 13, 15, 16, 18, 19 and another half course.

Fourth Year:—9, 10, 11, 12, 14, 16, 18, 19, 20.

English requirements for the honour courses in English and Latin, English and French, and English and German:—

Third Year:—13, and three courses (aggregating six hours) chosen from 5 to 20.

Fourth Year:—14, and three courses (aggregating six hours) chosen from 5 to 20, not taken in the third year.

English requirements for the honour courses in English and History, English and Philosophy:—

Third Year:—Any courses aggregating eight hours chosen from 5 to 20.

Fourth Year:—Any courses aggregating eight hours chosen from 5 to 20, not taken in the third year.

GRADUATE COURSES.

21. Anglo-Saxon.

Beowulf.

2 hrs. sess.....Professor Moyse.

22. Germanic Philology.

2 hrs. sess.....Professor Moyse.

23. Comparative Literature.

Epistolatory Literature.

2 hrs. sess.....Professor Lafleur.

24. Comparative Literature.

Memoirs and Memoir-Writers beginning with Philippe de Commines.

2 hrs. sess.....Professor Lafleur.

25. Chaucer.

2 hrs. sess.....Mr. Latham.

Prerequisite:—15.

26. Drama in England From 1642 to 1900.

2 hrs. sess.....Assistant Professor Macmillan.

Candidates for M.A. in English must take twelve hours of lectures a week, six of which shall be selected from "Graduate Courses." The remainder may be selected from 5 to 20, inclusive, if not already taken. 13 is compulsory.

Candidates for M.A. with English as a major subject must take eight hours of lectures a week, four of which must be selected from "Graduate Courses." Course 13 or its equivalent is compulsory.

Candidates for M.A. with English as a minor subject must take four hours of lectures a week, inclusive of 1 to 4.

DEPARTMENT OF GEOLOGY AND MINERALOGY.

PROFESSORS:—{FRANK D. ADAMS. J. AUSTEN BANCROFT.

ASSISTANT PROFESSOR OF MINERALOGY:—RICHARD P. D. GRAHAM.

LECTURER:—J. STANSFIELD.

SESSIONAL LECTURER:—JOHN A. DRESSER.

1. General Geology.

3 hrs. sess.; Mon., Wed., Fri., at 9....
Professors Adams and Bancroft.

Weekly excursions on Saturday morning while the season permits.
On their discontinuance, 2 hrs. lab., Sat., at 10.

Text-book :—Scott, Introduction to Geology.

2. Physiography.

2 hrs. sess.; Th., Fri., at 2.....Professor Bancroft.

Prerequisite:—1.

3. Canadian Geology.

1 hr., 1st term. Wed., at 11.....Professor Bancroft.

Prerequisite:—1.

4. Historical Geology (Advanced).

1 hr. sess. (hour to be arranged); 2 hrs. lab.,
2nd term.....Mr. Stansfield.

Prerequisite:—1..

5. Mineralogy.

2 hrs. sess.; Tu., Th., at 9.....Assistant Professor Graham

6. Determinative Mineralogy.

2 lab. periods of 3 hrs. each during the first term.
Th., Fri., at 2....
Assistant Professor Graham and Mr. Stansfield.

7. Ore Deposits.

4 hrs., 2nd term; Tu., at 10; Wed., Th., at 11.....Professor Adams.

8. Economic Geology.

1 hr., 1st term; Th., at 11.....Professor Bancroft

9. Mineralogy.

2 lab. periods, 1st term, 3 hrs. each.
Hours to be arranged.....Assistant Professor Graham.

10. Petrography.

1 hr., 1st term; Tu., at 10; 1 lab. (3 hrs.) sess....
Professor Bancroft, Assistant Professor Graham and Mr. Stansfield.

11. Palaeontology.

1 hr. 1st term; 1 lab. (3 hrs.), 1st term.
All hours to be arranged.....Mr. Stansfield.

12. Geological Colloquium.

One evening in alternate weeks (to be arranged)....
Professor Adams, Professor Bancroft, Assistant Professor Graham and Mr. Stansfield.

13. Geological Survey.

Two weeks at the close of the third year, or immediately before beginning the regular course of the fourth year.

HONOUR COURSE.

Third Year:—1, 5, 6; also Zoology 2 and Chemistry 1 (if not already taken, in which case equivalent courses will be assigned).

Fourth Year:—2, 3, 4, and 7 to 13, inclusive; also Botany 2.

DEPARTMENT OF HISTORY.

PROFESSOR:—CHARLES W. COLBY. (On leave.)

ASSOCIATE PROFESSOR:—C. E. FRYER. (In charge of Department.)

SESSIONAL LECTURER:—VERA L. BROWN.

1. Great Men and Great Movements.

2 hrs. sess.; Tu., at 10; Th., at 11 (Men); Fri., at 9;
Wed., at 12 (Women, R.V.C.).....Miss V. Brown.

2. The European States System.

2 hrs. sess.; Tu., Wed., at 11.....Professor Fryer.

3. History of Europe, 1519-1789.

4 hrs. sess.; Mon., Wed., Th., Fri., at 10.....Miss V. Brown.
(Omitted in 1919-20.)

4. The Renaissance.

2 hrs. sess.....Professor Colby.
(Omitted in 1919-20.)

5. The Political History of Europe From 1815-1878.

2 hrs. sess.....Miss V. Brown.

6. Europe since the Fall of Bismarck.

2 hrs. sess.; Mon., Wed., at 4.....Professor Colby.
(Omitted in 1919-20.)

7. History of Canada, 1763-1837.

2 hrs. sess.....Professor Fryer.

8. Historical Method and Criticism.

Seminar, 2 hrs. sess.....Professor Fryer.

9. The History of England Since 1784.

4 hrs. sess.; Mon., Tu., Th., Fri., at 9.....Professor Fryer.

10. Recent History of the Great Powers.

2 hrs. sess.....Professor Fryer.

11. History of European Colonisation.

2 hrs. sess.....Miss V. Brown.

HONOUR COURSE.

Prerequisites:—1 and 2.
History requirements for the honour course in History and English (1919-20):—
Third Year:—5, 7, 9.
Fourth Year:—5, 9, 8, or 10 or Economics and Political Science 10.

GRADUATE COURSE.

Prerequisites:—1 and 2 and two full courses selected from courses 3 to 10 inclusive, or equivalent courses taken elsewhere.

LAW.

PROFESSOR:—R. W. LEE.

1. Roman Law.

3 hrs. sess.; Mon., Wed., Fri., at 9.30 a.m.....Dean Lee.

2. Legal History.

2 hrs. sess.

3. Jurisprudence.

2 hrs. sess.

DEPARTMENT OF MATHEMATICS.

PROFESSOR:—J. HARKNESS.
ASSOCIATE PROFESSOR.—T. RIDLER DAVIES.
ASSISTANT PROFESSORS:—C. T. SULLIVAN. L. V. KING.

1. Ordinary Mathematics.

4 hrs. sess.; Mon., Tu., Wed., Th., at 9 (Men); Mon., Tu., Th., Fri., at 12 (Women R. V. C.).....Associate Professor Davies.
Plane and Solid Geometry:—2 hrs. 1st term.
Text-book:—Hall and Stevens.
Algebra:—2 hrs. 2nd. term.
Text-book:—Hall and Knight (omitting chaps. 40 to 42 inclusive).
Trigonometry:—2 hrs. sess.
Text-books:—Hall and Knight, Elementary Trigonometry (to page 210 and chap. 19); Bottomley, Logarithmic Tables.

2. Advanced Ordinary Mathematics.

Geometry and trigonometry and modern pure geometry; advanced algebra, higher trigonometry and theory of equations.
4 hrs. sess.....Professor Harkness and Ass ciate Professor Davies.

3. Solid Geometry and Geometrical Conic Sections and Algebra.

3 hrs. sess.; Mon., Wed., Fri., at 11.....Ass ciate Professor Davies.
Solid Geometry:—
Text-book:—Wilson Solid Geometry and Geometrical Conics.
Algebra:—Permutations and combinations; binomial theorem; exponential and logarithmic series; interest, annuities and bonds; undetermined co-efficients; partial fractions; summation of typical series; probabilities; determinants; graphic methods.
Text-book:—Hall and Knight, Higher Algebra.

4. Analytical Geometry and Infinitesimal Calculus.

4 hrs. sess.; Mon., Wed., Th., Fri., at 10....
Professor Harkness and Asst. Professor Sullivan.
Advised Elective No. 5.

5. Spherical Trigonometry.

1 hr., 2nd term.....Associate Professor Davies.

6. Dynamics, Statics and Hydrostatics.

2 hrs. sess.....Assistant Professor King.
Prerequisite:—1 or 2—preferably 2.

7. Advanced Differential Calculus, Differential Equations and Geometry of Three Dimensions.

4 hrs. sess.....Professor Harkness.

8. Theory of Functions.

3 hrs. sess.....Professor Harkness.

9. Modern Differential Equations.

2 hrs. sess.....Professor Harkness.

10. Modern Analytical Geometry.

5 hrs. sess.....Professor Harkness.
(Omitted in 1919-20.)

11. Differential Equations of Physics.

5 hrs. sess.....Professor Harkness.
(Omitted in 1919-20.)

12. The Elements of Astronomy.

2 hrs., 1st or 2nd term as may be arranged.....
Prerequisites:—1 and 3. Associate Professor Davies.

HONOUR COURSE IN MATHEMATICS AND PHYSICS.

Prerequisites:—Mathematics 2; Physics 1.
Second Year:—Mathematics, 4, 5, 6; Physics 2, 4.
Third Year:—Mathematics 7, 12; Physics 3, 5, 6, 7.
Fourth Year:—Mathematics, 8,9; Physics 8, 9, 10, 11, 12, 13.

GRADUATE COURSE.

Mathematics:—8, 9. Prerequisites:—2, 3, 4, 5, 6, 7.

DEPARTMENT OF MODERN LANGUAGES.

PROFESSOR:—HERMANN WALTER.

ASSOCIATE PROFESSOR:—R. DU ROURE.

ASSISTANT PROFESSORS:—J. L. MORIN. E. T. LAMBERT.

LECTURER IN FRENCH (ROYAL VICTORIA COLLEGE):—MLLE. L. TOUREN.

LECTURER IN FRENCH:—P. VILLARD.

A.—French.

Owing to the position which this University occupies in the midst of a very large French-speaking population there is a permanent demand for courses of a practical, conversational character. The Department profits by the co-operation of French church services, French newspapers, French theatres, French literary clubs, and public lecture courses in the French language.

1. French Language.

4 hrs. sess. . .
Mon., Wed., Th., Fri., at 10 (Women, R.V.C.)
Mon., Tu., Wed., Fri., at 11 (Men).
Asst. Professor Morin, Mr. Villard, Mlle. Touren.

Texts:—(a) Bouvet, French Syntax and Composition (Heath); Super-Histoire de France (Holt); J. Hathaway, Modern French Stories (A.B. Co.) (b) Daudet, Trois Contes Choisis (Heath); Erckmann-Chatrian, Madame Thérèse (Heath); Labiche, Le Voyage de M. Perrichon (Holt); Malot, Sans Famille (Heath); Poésies Choisies.

Advanced Section, in place of course (b) Daudet, Tartarin de Tarascon (A.B. Co.); Sand, La Petite Fadette (Heath); Racine, Andromaque (Ginn); Mérimée, Colomba (Heath); Montesquieu, Lettres Persones (Macmillan); Poésies Choisies.

2. French Science Readings.

2 hrs. sess. . . . . Mr. Villard.
Text:—Bowen, A First Scientific French Reader (Heath).

3. French Language.

4 hrs. sess.; Mon., Tu., Wed., Th., at 9 (Women, R.V.C.). Mon., Tu., Wed., Th., at 9 (Men).
Asst. Professor Morin, Mr. Villard, Mlle. Touren.

Texts:—(a) Grandgent, French Composition (Heath); Corneille, Le Cid (Heath); Vigny, Cinq-Mars (Heath); Elementary Historical French Grammar. (b) Racine, Britannicus (Holt); Moliere, Les Femmes Savantes (Heath); Sand, La Mare au Diable (Heath); Chateaubriand, Atala (Heath); Mansion, Littérature française.

Advanced Section, in place of course (b); Moliere: Les Précieuses ridicules (Heath); Lesage: Gil Blas (A.B. Co.); Voltaire: Zadig (Macmillan); Musset: Trois Comédies (Heath); Balzac: Cinq Scènes de la Comédie humaine (Heath); Mansion: Littérature française.

Private Readings:—Pailleron: Le Monde où l'on s'ennuie (Heath); Hugo: Quatre-Vingt-Treize (Heath).

4. French Commercial Course.

2 hrs. sess.....Mr. Villard.

Text:—Janau, Commercial French Correspondence (Longmans). Commercial students also take 3 (a).

5. French Commercial Course.

Histoire de la Literature française au 19 ème siècle; Janau, Commercial French Correspondence; Clerget, Manuel d'économie commerciale.

6. French Literature:—General Course to the end of the Seventeenth Century.

4 hrs. sess.; Mon., Tu., Th., Fri., at 12.

(Given in 1920-21).

Texts:—Oxford Book of French Verse; Darmsteter Morceaux Choisis du XVIIe siècle (Delagrave); Montaigne, Selections (Heath); Rabelais, Selections (Macmillan); French Prose of the XVIIth Century (Heath); Corneille, Nicomède (Macmillan); Racine, Les Plaideurs (Heath); Molière, Le Misanthrope (Oxford); Boileau, Selections (Heath); Doumic, Histoire de la Littèrature française.

Prose Composition:—Spiers, Translation into French Prose (Simpkin Marshall).

7. French Literature:—General Course, Eighteenth and Nineteenth Centuries.

4 hrs. sess.; Mon., Tu., Th., Fri., at 12.

(Given in 1919-20.)

Texts:—Lesage, Gil Blas (Heath); Buffon, Discours sur le style; Marivaux, Le jeu de l'amour et du hasard (Macmillan), Diderot, Selections (Heath); Sedaine, Le Philosophe sans le ssavoir; J. J. Rousseau, Selections; Voltaire, Zaire; Chateaubriand, Atala René (Nelson); Flaubert, Trois Contes (Nelson); Hugo, Préface de Cromwell (Oxford); Balzac, Eugénie Grandet (Nelson); Taine, Origines de la France Contemporaine (Holt); Les Maîtres de la Critique Contemporaine (Heath); Doumic, Histoire de la Littérature française.

Prose Composition:—Spiers, Graduated Course of Translation into French Prose (Simpkin, Marshall & Co., London).

N.B.—In order to be admitted to courses 5 and 6 a student must know French well enough to take lectures delivered in French and express himself in French with some fluency and correctness.

8. Mediaeval French Literature and Philology.

3 hrs. sess. ..... Professor Walter.
(Given in 1919-20.)
Texts:—Darmsteter's Cours de Grammaire Historique, Parts I and II, and Bartsch, Chrestomathie de l'Ancien Française.

9. Composition.

1 hr. sess. .....
Nicholson and Brennan, Passages for Translation into French and German (Oxford University Press).

10. History of the French Novel.

2 hrs. sess.
(Given in 1920-21.)

11. Evolution of the French Lyric.

1 hr. sess.
(Given in 1919-20.)

HONOUR COURSE.

Prequisites:—1, 3.
Third and Fourth Years:—6, 7, 8, 9, (two years), 10, 11.
In order to obtain honours, candidates must be able to speak French fluently.

GRADUATE COURSE.

The following resident graduate courses may be offered in 1919-20:

M.A. COURSES.

1. Comparative Literature (English Section, Course 16). Two hours weekly.
2. Versification, histoire et technique. One hour.
3. Le mouvement réaliste dans la seconde moitiè du XIXe siècle. Two hours.
4. Histoire de la langue depuis le XVIe siècle. One hour.
5. Histoire de la Comédie en France. Two hours.
6. Exercices pratiques. One hour.

Candidates taking French only will take all the above courses; those taking French as a major along with another subject as a minor will omit 1 and either 2 or 4; those taking French as a minor will take either 3 or 5 and one of the one-hour courses.

Candidates who have not taken French Philology in their undergraduate course must take it as part of their M.A. course, except when French is taken as a minor. For further M.A. requirements, see page 275.

B.—German.

1. German, Beginners' Course.

4 hrs. sess,; Mon., Tu., Th., Fri., at 2 (Women, R.V.C.); Mon., Tu., Th., Fri., at 4 (Men).....Asst. Professor Lambert.

Texts:—(a) For B.A. students, Van der Smissen und Fraser, High School German Grammar (Copp, Clark Co.); Guerber, Marchen und Erzahlungen, vol. I (Heath); Baker, German Stories (Holt); (b) For B.Sc. students, Bierwirth, Beginners German (Holt) ; Guerber Marchen und Erzahlungen, vol. I (Heath) ; German Science Reader (Heath).

Students intending to proceed to course 4 will be required to take a supplementary examination in September (for which no fee will be charged) covering the rest of the grammar and the following texts:—Riehl, Die vierzehn Nothelfer (A. B. Co.); Moser, Der Bibliothekar (Heath); Schrakamp, Ernstes und Heiteres (A. B. Co.). Arrangements will be made by which students will be enabled to do this work by correspondence. This examination will take place at the time of the regular supplemental examinations.

2. German Language.

4 hrs. sess.; Mon., Tu., Th., Fri., at 2 (Women, R.V.C.); Mon., Tu., Th., Fri., at 4 (Men).....Asst. Professor Lambert.

Texts:—Van der Smissen und Fraser, High School German Grammar (Copp, Clark Co.); Nichols, Two German Tales (Holt); Freytag, Die Journalisten (Ginn); Fulda, Talisman (Holt); Collmann, Easy German Poetry (Ginn, Ed. 1913); Horning, German Composition.

3. German Science Reading Course.

A course in reading Science German is given for students who have matriculated in this language or have taken it in the first year. The text will be chosen to meet the requirements of the class.

4. German Language.

4 hrs. sess.; Mon., Tu., Wed., Fri., at 11 (Women, R.V.C.); Fri., at 9, Tues. at 10, Thurs. at 11, Wed. at 12 (Men).....
Assistant Professor Lambert.

Texts:—Horning, German Composition; Schiller, Jungfrau von Orleans (Holt); Scheffel, Trompeter von Sökkinzen (Heath) ; Goethe, Egmont (Ginn); Keller, Bilder aus der Deutchen Literatur (American Book Co., edition 1905).

5. German Literature (Nineteenth Century).

Prerequisite:—1 or 2, and 4.

4 hrs. sess.; Mon., Wed., Th., Fri., at 10.....Professor Walter.

(Given in 1920-21.)

Texts:—Kleist, Prinz Friedrich von Homburg (Ginn); Grillparzar, Sappho (Ginn); Hebbel, Agnes Bernauer; Heine, Prose (Oxford Univ.

Press); Heine, Verse; Hauptmann, Die versunkene Glocke; Keller, Sieben Legenden; History of Literature, Nineteenth Century (Kluge).

Prose Composition:—Wiehr, German Composition (Oxford).

6. German Literature (Eighteenth Century).

Prerequisite:—1 or 2, and 4.

4 hrs. sess.; Mon., Wed., Th. Fri., at 10.....Professor Walter.

(Given in 1919-20.)

Texts:—Lessing, Emilia Galotti (Ginn); Lessing, Nathan (A. B. Co.); Goethe, Iphigenie (Pitt Press); Schiller, Wallenstein's Tod; Collins, Selections from German Classics (Oxford Univ. Press); Kluge, Geschichte der deutschen Literatur. *Prose Composition:*—Wiehr, Prose Composition (Oxford University Press).

N.B.—In order to be admitted to courses 5 and 6 a student must know German well enough to take lectures delivered in German and express himself in German with some degree of fluency and correctness.

7. Geschichte des deutschen Trauerspiels.

3 hrs. sess.....Professor Walter.

(Given in 1919-20.)

8. German Composition.

1 hr. sess.....Professor Walter.

Text:—Nicholson and Brennan, Passages for Translation into French and German (Oxford Univ. Press).

9. Mediaeval German Literature and Philology.

3 hrs. sess.....Assistant Professor Lambert.

(Given in 1920-21.)

Texts:—Bachmann, Mittelhochdeutsches Lesebuch (Fæsi and Beer, Zurich); Behaghel, Die deutsche Sprache.

10. Entwicklung der deutschen Lyrik.

3 hrs. sess.....Professor Walter.

(Given in 1920-21.)

HONOUR COURSE.

Prerequisites:—1 or 2, and 4.

Third and Fourth Years:—5, 6, 7, 8, 9, 10.

The German language alone is used in class instruction, and, in order to obtain honours, candidates must be able to speak German fluently.

GRADUATE COURSE.

The following resident Graduate Courses may be offered in 1919-20:

M.A. COURSES.

1. Comparative Literature (see English section, course 16). Two hours weekly.
2. Gœthe's Faust. One hour.
3. Geschichte des deutschen Lustspiels. Two hours.
4. Die Lyrik im XIX. Jahrhundert. Two hours.
5. Schiller's Jugenddramen. One hour.
6. Praktische Ubungen. One hour.

Candidates taking German only will take all the above courses; those taking German as a major along with another subject as a minor will omit 1 and either 2 or 5; those taking German as a minor will take either 3 or 4 and one of the one-hour courses.

Candidates who have not taken German Philology in their undergraduate course must take it as part of their M.A. course, except when German is taken as a minor. For further M.A. requirements, see page 275.

DEPARTMENT OF ORIENTAL (SEMITIC) LANGUAGES AND LITERATURE.

PROFESSORS:—{C. A. BRODIE BROCKWELL. A. R. GORDON.

SESSIONAL LECTURER IN HELLENISTIC JEWISH LITERATURE:—G. ABBOTT-SMITH.

1. **Hebrew and Semitic History.**
   4 hrs. sess.; Mon., Tu., Th., Fri., at 5.....Professor Brockwell.

2. **Hebrew Readings in the Old Testament.**
   4 hrs. sess.; Mon., Tu., Wed., Fri., at 11.....Professor Brockwell.
   Prerequisite :—1.

3. **The Literature of the Jewish Hellenists:—Poetical Texts.**
   4 hrs. sess.....Professor A. R. Gordon and Rev. Abbott-Smith.

4. **Arabic and Aramic.**
   4 hrs. sess.....Professor Brockwell.
   Prequisites:—1 and 2.

5. **Biblical and Post-Biblical Hebrew Texts.**
   4 hrs. sess.....Professor Brockwell.

6. **The Literature of the Jewish Hellenists:—Prophetic Texts.**
   4 hrs. sess.....Professor A. R. Gordon and Rev. Abbott-Smith.

7. **Hebrew Texts.**
   4 hrs. sess.....Professors Brockwell and A. R. Gordon.

8. History of the Greek and Roman Periods.

1 hr. sess.....Professor A. R. Gordon.

9. Arabic and Aramaic, or Phoenician, or Ethiopic, or Transliterated Assyrian Texts.

3 hrs. sess.....Professor Brockwell.

10. Semitic Archaeology, or the History of Jewish Literature (from the close of the Old Testament Canon to A.D. 1500), or The Comparative Philology of the Semitic Languages, or Semitic Myths and Socal Institutions.

3 hrs. sess.....Professor Brockwell.

HONOUR COURSE IN SEMITICS.

Prerequisite:—1.
Third Year:—7, 8, 9, 10.
Fourth Year:—The same continued.

DEPARTMENT OF PHILOSOPHY.

PROFESSOR:—W. CALDWELL.

ASSOCIATE PROFESSOR OF LOGIC AND METAPHYSICS:—
J. W. A. HICKSON.

ASSISTANT PROFESSOR OF PSYCHOLOGY:—
WILLIAM D. TAIT.

1. Elementary Psychology

2 hrs. sess.; Mon., Wed., at 10.....Asst. Professor Tait.
Text-book :—Pillsbury, Fundamentals of Psychology, 1916.

2. Logic:—An Introductory Course.

2 hrs sess.; Th., Fri., at 10.....Professor Hickson.
Text-book:—Mellone, Introductory Text-book of Logic (6th ed.).

3. Introduction to Philosophy.

2 hrs. sess.....Professor Caldwell.

4. Moral Philosophy.

4 hrs. sess.; Mon., Tu., Th., Fri., at 12.....Professor Caldwell.

5. Advanced Moral Philosophy.

2 hrs. sess.; Mon., Tu., at 4.....Professor Caldwell.

6. Greek Philosophy.

2 hrs. sess; Mon., Tu., at 5.....Professor Caldwell.

7. History of Modern Philosophy.

4 hrs. sess.

1st term: From the Renaissance to Kant.....Professor Hickson.
2nd term: From Kant to the Present Time.....Professor Caldwell.

8. The Theory of Scientific Method.

2 hrs. sess.....Professor Hickson.

9. Theory of Knowledge and Metaphysics.

4 hrs. sess.....Professor Hickson.

10. Contemporary Tendencies in Philosophy.

2 hrs. sess.....Professor Hickson.
Prereq isite :—7.

11. Experimental Psychology.

4 hrs. sess.....Assistant Professor Tait.

12. The British Empiricists from Locke—Discussions and Lectures.

2 hrs. sess.....Professor Hickson.

13. Philosophy of Religion.

2 hrs. sess.....Professor Caldwell.

HONOUR COURSE.

Prerequisites:—1, 2.

Third Year:—Any three full courses from 4 to 13 inclusive.

Fourth Year:—Any three full courses from 4 to 13 other than those already selected. In addition, a course in any of the following subjects:—education, history, economics, English literature, physics, physiology, zoology—is required in each of the third and fourth years.

The Philosophy requirements for honours in Philosophy and English, and Philosophy and German, are eight hours selected from 4 to 15 in each of the third and fourth years.

COURSES PRIMARILY FOR GRADUATES.

14. Psychological Laboratory.

Assistant Professor Tait.

15. Philosophical Seminary.

2 hrs. sess.....Professor Hickson
Studies in the Problem of Perception; papers, discussions and lectures.

16. Ethical Seminary.

2 hrs. sess.....Professor Caldwell.
Recent and Contemporary Ethical Theories.

DEPARTMENT OF PHYSICS.

PROFESSOR:—A. S. EVE.

ASSOCIATE PROFESSORS:—L. V. KING. J. A. GRAY. A. N. SHAW.

ASSISTANT PROFESSORS:—N. E. WHEELER. H. E. REILLEY.

DEMONSTRATORS:—A. A. SCOTT. VIOLET HENRY. G. H. HENDERSON. R. J. CLARK. E. S. BIELER.

1. **General Course.**

2 hrs. sess.;Tu., Th., at 2 (Men); Tu., Th., at 3 (Women); 2 hrs. lab.....Professor Eve.
Text-book:—Kimball's College Physics.

2. **Heat, Sound and Light.**

2 hrs. sess.; Tu., Th., at 11; 2 hrs. lab.....Professor Shaw.
Text-book:—Duncan and Starling's Heat, Light and Sound (Macmillan's.)

3. **Electricity and Magnetism.**

2 hrs. sess.; Mon., Fri., at 10.....Professor Gray.
Text-book:—Brook's and Poyser's Magnetism and Electricity.
Laboratory manuscripts (Renouf Publishing Co.).

4. **Heat, Sound and Light (Advanced).**

2 hrs. sess.....Assistant Professor Wheeler.

5. **Properties of Matter.**

2 hrs. sess.....Assistant Professor Wheeler.

6. **Electricity and Magnetism (Advanced).**

2 hrs. sess.....Assistant Professor Wheeler.

7. **Statics, Dynamics of a Particle and Rigid Dynamics.**

2 hrs. sess..... Professor King.

8. **Vector Analysis.**

2 hrs. 1st term.....Professor Eve.

9. Hydrodynamics and Sound.

2 hrs. sess.....Professor King.

10. Electrical Measurements.

1 hr. sess.; Wed., at 10; 5 hrs. lab.....Professor King.

11. Radioactivity.

2 hrs. 2nd term.....Professor Eve.

12. Electromagnetic Theory.

2 hrs. sess.....Professor Gray.

13. Molecular Physics.

2 hrs. 1st term.....Professor Shaw.

14. Theory of Heat.

2 hrs. 2nd term.....Professor Shaw.

15. Kinetic Theory of Matter.

2 hrs. sess.....Professor King.

16. Advanced Mathematical Physics.

2 hrs. sess.....Professor King.

HONOUR COURSE IN MATHEMATICS AND PHYSICS.

Prerequisites:—Mathematics 2; Physics 1.
Second Year:—Mathematics 4, 5, 6; Physics 2, 4.
Third Year:—Mathematics, 7, 12; Physics, 3, 5, 6, 7.
Fourth Year:—Mathematics 8, 9; Physics 8, 9, 10, 11, 12, 13.

DEPARTMENT OF ZOOLOGY.

PROFESSOR:—ARTHUR WILLEY.

LECTURERS:—J. STAFFORD. F. S. JACKSON

1. Comparative Anatomy.

As in first year Medicine.

2. Elementary Zoology.*

2 hrs. 1st term; Mon. and Wed., at 10.....Professor Willey.
4 hrs. lab., Sat., 9 to 1.

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* Zoology 2 will not exempt from Zoology 1.

3. Zoology of Invertebrata.†

2 hrs. sess.....Dr. J. Stafford.
4 hrs. lab.

4. Historical Zoology.

1 hr. sess.....Professor Willey.

5. Zoology of Vertebrata.

2 hrs. sess.....Professor Willey.
4 hrs. lab.

6. Comparative Embryology.

2 hrs., 2nd term.....Professor Willey.
4 hrs. lab.

HONOUR COURSE IN BIOLOGY.

Prerequisites:—Botany 2, Chemistry 1, Zoology 2.
Third Year:—Botany 4 and 6; Zoology 3 and 4.
Fourth Year:—Botany 7 and 8; Zoology 5 and 6.

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† This is a prerequisite for students who may hereafter wish to undertake zoological work at the Marine Laboratories under the Biological Board of Canada.

TIME TABLES OF LECTURES, 1919-20.

FACULTY OF ARTS.

HOUR.	FIRST YEAR MEN.	FIRST YEAR WOMEN.	SECOND YEAR	THIRD & FOURTH YEARS
Lectures at 9, omitting Friday.	Mathematics, 1	English, 1 and 2; (Comp., Tues., Lit., Mon. and Wed.) Hist., 1 (Fri.)	French, 3. German, 4—Men (Fri.)	Geology, 1. (Mon., Wed., Fri.) Greek, 7 and 8. English, 5 (Tu., Th.) Economics, 12 (Tu.,W.) History, 9. Geology, 5 (Tu., Th.).
Lectures at 10, omitting Tuesday.	German 1 (b) Latin, 1. Hist.,1 (Tues.)	French, 1.	Botany, 2 (M., W.) Zoology, 2 (M., W.) Logic,2 and Psychol., 1; German–4, Men (Tues.)	English, 7 (Tu., Th.) English, 16 and 17 (M.F.). Economics 4, 6, 8, 11. Latin, 3 and 4. History, 3. Mathematics, 4. German, 5 & 6. Botany, 4. Physics, 3 (Mon., Fri.)
Lectures at 11, omitting Thursday.	French, 1. Hist.,1 (Thur.)	Latin, 1.	Econ., 1 (M., Fri.) History, 2 (T., W.) German,4—Women. German, 4—Men (Th.) Mathematics, 3. (M., W., Fri.)	English, 6 (Tu., Th.). Greek, 5 and 6. Economics, 2. Hebrew, 2. English, 12 (Wed.,Th.); 10 (Mon., Fri.). Physics, 2 (Tu., Th.).
Lectures at 12, omitting Wednesday.	English, 1 & 2. (Comp., Mon., Lit., Tues. & Thurs.)	Mathematics, 1. Hist., 1 (Wed.)	Latin, 2. German, 4—Men (W.)	English, 11 (M., W.) English, 20 (Tu., Th.). Philosophy, 4; French, 6 & 7.
Lectures at 2, omitting Wednesday.	Physics, 1. (Tu.& Thurs.)	German, 1 & 2.	Chemistry, 1 (Mon., Tues. & Thurs.)	English 3 (Tu., Fri.) Geology, 2 (Th., Fri.) Political Science. 3. Zoology, 3, (Tu. & Fri.)
Lectures at 3, omitting Wednesday.	Physics, 1 (B. Sc.) (Tu. & Th.) Greek, 1 & 2.	Physics, 1. (Tues. & Thurs.) Physical Education. (Mon. & Fri.).	English Lit., 4 (Mon., Thurs. and Fri.) English Comp., 3 (Tues.).	English, 4 (Tu., Fri.). Economics 5, 7, 9, 10. Chemistry. 2. Psychology. 11. Mechanics (Maths., 6) (Mon. & Thurs.) Astronomy (Math. 12).
Lectures at 4, omitting Wednesday.	German, 1 (a) & 2.	Greek, 1 & 2.	Greek, 3 & 4.	Philosophy, 5 (M., Tu.) Philosophy, 9. English, 9. (Tues. & Fri.) English, 5. (Mon. & Thurs.) Comp. Philogy, 5. (Tues. & Thurs.).
Lectures at 5, omitting Wednesday			Hebrew, 1.	Education, (1 & 2). Philosophy, 6 (M., Tu).

Laboratory periods and hours for Honour classes will be arranged at the commencement of the session.

The hours for Physical Education for women students of the second, third and fourth years will be arranged by the department.

EXAMINATION TIME TABLES.—Faculty of Arts.

EXHIBITION, SCHOLARSHIP AND SUPPLEMENTAL EXAMINATIONS, SEPTEMBER, 1919.

DATE.	Hour.	Supp. to First Year Sessional.	Second Year Exhibitions.	Supp. to Second Year Sessional.	Scholarships (Third Year.)	Supp. to Third Year Sessional.*
Thursday.....18	9.00	English, 1.	English Literature (Shakespere); History.	English, 4.	English Literature (Shakespere and Milton).	English, 5.
	2.30	English, 2.	English Literature (Macaulay and Scott.)	English 3.	English Literature (Ruskin and Arnold).	English 9 & 22.
Friday.....19	9.00	Latin, 1 (Books).	Latin Books	Latin, 2 (Books).	Latin Texts.	History, 9.
	2.30	Latin 1 (Composition, Sight Translation and Roman History).	Latin Composition, Sight Translation and Roman History.	Latin, 2 (Composition and Sight Translation).	Latin Composition, and Sight, and Roman History.	History, 7.
Monday.....22	9.00	French, 1, 2.	French Texts.	French, 3, 4.	French Books	French, 5.
	2.30	History, 1.	German Texts.	Semitics, 1.	French Composition and Sight.	Philosophy, 14.
Tuesday.....23	9.00	Algebra, 1.	Geometry (Major); Geometry and Trigonometry (Minor).	Maths. 3 (Algebra).	Animal Biology. Analytical Geometry.	Maths. 4. Education, 2.
	2.30	Geometry, 1.	French Composition and Sight.	Philosophy, 1.	German Books. Plant Biology. Logic.	Education, 1
Wednesday....24	9.00	Trigonometry, 1.	Greek Books. Algebra (Minor), Algebra, Trigonometry and Theory of Equations (Major).	Greek, 3 & 4 (Books) German, 4. Philosophy, 3.	Greek Texts. Physics. Psychology.	History, 3.
	2.30	Physics, 1.	Greek Composition, Sight Translation, and History.	Greek, 3 & 4 (Composition and Sight Translation). Zoology, 2.	Chemistry, Greek Composition, Sight Translation, and History. Economics.	Chemistry, 2, 6.
Thursday.....25	9.00	Greek, 1 & 2 (Books). German (1, (a), 1, (b), 2, 3.)	German Composition and Sight	Maths., 3 (Conics and Solid Geometry). Botany 2).	Infinitesimal Calculus, German Comp. and Sight.	Chemistry, 9. Economics, 2.
	2.30	Greek, 1 & 2 (Composition and Sight).	Physics.	Chemistry, 1. History, 2. Economics, 1.	Economics, Modern History and English Composition. Philosophy (Berkeley)	Economics, 3. Physics, 3.

*Periods for other subjects to be arranged at the time of the Examination.

EXAMINATION TIME TABLES

FACULTY OF ARTS.

FIRST TERM EXAMINATIONS, 1920.

	FIRST YEAR	SECOND YEAR
Saturday, January 17, 1920—		
9-11 A.M.	*Geometry, 1.	French, 3.
1-3 P.M.	Greek, 1 and 2, Physics, 1 (B.Sc.)	English, 4.
4-6 P.M.	English, 1 and 2	Latin, 2.
Monday, January 19th.—		
9-11 A.M.	Latin, 1.	Philosophy 1, 2. 3. *Zoology, 2.
1-3 P.M.	German, 1 & 2.	Greek, 3 & 4.
4-6 P.M.	History, 1.	German, 4.
Tuesday, January 20th.—		
9-11 A.M.	French, 1.	Economics, 1. *Mathematics 3.
1-3 P.M.	Physics, 1 (B.A.)	Hebrew, 1. Chemistry, 1.
4-6 P.M.	Trigonometry, 1	History, 2

* Final Examination, 9-12 A.M.

EXAMINATION TIME TABLES.

Faculty of Arts

Sessional Examinations, 1920.

Morning examinations commence at 9 ; afternoon examinations at 2.

(Numbers do NOT indicate years, but the number of the course in the Department.)

Date.	Forenoon.	Afternoon.
Saturday, April 17.....	Latin, 5. Philosophy, 3 & 17. Maths., 7. Physics, (1 Yr. Comm.)	Latin, 5. History, 5. Chemistry, 3 (a &b).
Monday, April 19.....	Accountancy (I & II Comm.) Physics, 1. Hebrew, 1. Education, 1.	Hebrew, 1. Maths., 5. Education, 2.
Tuesday, April 20.....	Maths., 1 (Alg.) Maths., 2 (Geom.). French, 3 (a) & 4. Economics, 12. Geology, 1. German, 7. Greek, 7. History, 9. Chemistry, 5. Zoology, 5.	History, (1 Yr. Comm.) History, 1. French, 3 (b) & Advanced. Geology, 1. German, 7. Greek, 7. History, 9. English, 15.
Wednesday, April 21....	Econ. Geog. (I & II Comm.) Latin, 1 (Authors). Philosophy, 1. Economics, 11. English, 16. German, 6. Latin, 3. Physics, 3. Hebrew, 6.	Latin, 1 (Prose etc.) Botany, 2. English, 7. German, 6. Latin, 3. Maths. 6. Hebrew, 6. Chemistry, 6.
Thursday, April 22.....	French 1 (a) & 2. Economics 1. Maths. 3 (Alg.). English (II Comm.) Economics 2. Physics 2. English 10. Botany 5. Chemistry 15.	French 1 (b) & Advanced History 2. Economics 2. English 12. French 8.

SESSIONAL EXAMINATIONS—*Continued.*

DATE.	FORENOON.	AFTERNOON
Friday, April 23.....	English 1 & I. Comm. Latin 2 (Authors). Maths. (II. Comm.). Philosophy 4 & 14. French 7. English 20.	History of Commercé (II Yr.). English 2. Latin 2 (Prose etc.). Philosophy 4. French 7. Greek 5. Chemistry 7. English 11.
Saturday, April 24.....	Chemistry 1 & 13. Economics 3. English 17.	Maths. 1 (Trig.). Maths. 2 (Alg.). Economics 3. English 13. Geology 2. Zoology 3.
Monday, April 26.....	Pol. Economy (I Comm..) Greek 1 & 2. English 4 & 14. Economics 9. Philosophy 9. Chemistry 10.	Commercial Law (II Comm.). Greek 1 & 2. English 3. Philosophy 9.
Tuesday, April 27.....	Business Organiz. (II Comm.) German 1 & 2. Greek 3 & 4. English 9. Philosophy 5. Chemistry 8.	German 1, 2 & 3. Greek 3 & 4. Greek 5. English 5.
Wednesday, April 28....	German 4. Philosophy 6. Chemistry 2	German 4. Maths. 7.
Thursday, April 29.....	Geology 5. Chemistry 9.	
Friday, April 30.....	Maths. 4 (Calculus). History 7 & 8. Geology 4.	Maths. 4 (Conics). History 10

THE TRAINING OF TEACHERS.

THE FIRST-CLASS ACADEMY DIPLOMA.

In order to qualify for this, the highest teaching diploma of the province, students are required to take, during the last two years of their undergraduate course, courses 1 and 2 in the Department of Education; and (unless they hold the Model Diploma or show an equivalent in successful teaching experience) to do the specified fifty half days of practice and observation, either before or after graduation (see page 121). They are also required to take in the fourth year a course on the principles and practice of physical education in relation to schoolwork. This entitles them, if successful, to the Strathcona B. Certificate. Full particulars on page 270. Miss Cartwright, Mr.————————

School Art. A course of twenty lessons on the principles and practice of art in relation to schoolwork, comprising: brushwork, drawing, blackboard work, elements of design. Prof. Armstrong. Sat., 9–10.30 or 11–12.30.

ELEMENTARY, MODEL AND KINDERGARTEN DIPLOMAS.

The training for these diplomas is given at Macdonald College. (See Macdonald College Announcement.)

COURSES FOR TEACHERS OF SPECIAL SUBJECTS.

(Given under the Teachers' Training Committee.)

Physical Education. A one-year course leading to a diploma for physical instructors, recognized by the Council of Public Instruction. See page 272.

French. A summer school for teachers of French leading to a Specialist Diploma recognized by the Council of Public Instruction.

School Art. See above.

Kindergarten Assistants. A two-session course leading to a certificate, recognized by the Council of Public Instruction, and accepted for entrance to the Kindergarten Class of Macdonald College.

Particulars of the above courses, which are published separately, may be obtained on application to the Registrar.

SCHOOL OF COMMERCIAL STUDIES.

(OPEI TO BOTH MEN AND WOMEN.)

STAFF OF INSTRUCTION.

DIRECTOR-SECRETARY:—MR. R. M. SUGARS.

ENGLISH	ASST. PROFESSOR G. W. LATHAM.
MATHEMATICS	ASSOCIATE PROF. DAVIES. PROFESSOR HARKNESS.
POLITICAL ECONOMY	PROFESSOR LEACOCK. DR. HEMMEON.
HISTORY OF COMMERCE	MR. B. K. SANDWELL.
FRENCH	ASSISTANT PROFESSOR MORIN. DR. VILLARD.
GERMAN	ASSISTANT PROF. LAMBERT.
COMMERCIAL LAW	MR. S. DALE-HARRIS.
ACCOUNTANCY	MR. R. M. SUGARS. MR. LEWIS BRIMACOMBE.
DRAWING	PROFESSOR ARMSTRONG.
SPANISH	MR. R. M. SUGARS.
SCIENTIFIC MANAGEMENT AND BUSINESS ORGANIZATION	MR. R. M. SUGARS.
CHEMISTRY	PROFESSOR EVANS.
INDUSTRIAL CHEMISTRY	SPECIAL LECTURERS.
ECONOMIC GEOGRAPHY	DR. FRYER.
BANKING	
INSURANCE	
TRADE JOURNALS	MR. B. K. SANDWELL.
ECONOMICS OF TRANSPORT	DR. FRYER.

The School of Comnercial Studies offers:—

1. A systematic course of study, embracing the principal commercial sciences, and designed, with due modifications in each case, to prepare students for different business careers and for the profession of Chartered Accountant.

The course extends over three years, and students who successfully complete it will be granted the Degree of Bachelor of Commerce (B. Com.).

2. Extension Classes, open to anyone—whether engaged in business or not—whose general education and credentials are considered satisfactory to the University.

COURSE FOR THE DEGREE OF BACHELOR OF COMMERCE.

Candidates for entrance must qualify by passing either of the following examinations:—

(1) The Matriculation Examination of the University for the B.A. or the B.Sc. Course (see page 47). French, however, is obligatory.

(2) An examination on the following subjects:—

1. **English** (two papers).
2. **History** (one paper).
3. **French** (two papers, and oral examination).
4. **Elementary Mathematics** [**Algebra and Arithmetic** (one paper) and **Geometry** (one paper)].
5. One of the following: **Botany, Chemistry, Physics** (one paper).

For particulars of the work in each subject, see pages 51 to 60. No student will be admitted who has not passed in all the subjects.

The Cou se of Instruction is as follows:—

FIRST YEAR.

1. **English** (3 hours).
2. **Mathematics** (4 hours).
3. **French** (4 hours).
4. **Economic Geography** (1 hour).
5. **Accountancy** (3 hours).
6. **Political Economy** (1 hour).
7. **General History** (2 hours).
8. **Drawing** (2 hours).
9. **Physics.**

SECOND YEAR.

1. **English** (3 hours).
2. **Mathematics** (4 hours).
3. **French** (4 hours).
4. **Economic Geography** (1 hour).
5. **History of Commerce** (1 hour).
6. **Accountancy** (3 hours).
7. **Commercial Law** (2 hours).
8. **Commercial Organization** (1 hour).
9. **Chemistry** (2 hours before Christmas).
10. **Economics** (1 hour).

THIRD YEAR.

(a) Obligatory Subjects.

1. **English** (3 hours).
2. **Mathematics** (2 hours).
3. **French** (4 hours).
4. **Economics** (1 hour).

(b) Optional Groups.

(The student must select one of the following groups).

1. ACCOUNTANCY.

(a) **Theoretical Work, Problems and Exercises in Accountancy and Auditing** (3 hours).
(b) **Laboratory Work in Accountancy and Auditing** (2 hours).
(c) **Industrial Organization** (1 hour).

2. MANUFACTURING.

(a) **Industrial Organization** (1 hour).
(b) **Technical Work and Shop Work** (2 hours).
(c) **Machine Drawing** (1 hour).
(d) **Cost Accounting** (equivalent to 1 hour).
(e) **Industrial Chemistry** (equivalent to 1 hour).

3. BANKING, INSURANCE, FINANCE.

(a) A selection of two or more courses in **Advanced Economics** (equivalent to 4 hours).
(b) A special course in **Banking** (1 hour) **or**
A special course in **Insurance** (1 hour).
(c) **Investments** (equivalent to half-an-hour).
(d) **Insurance Accounts**, or **Bank Accounts** (equivalent to half-an-hour).

4. TRADE AND COMMERCE.

(a) A second modern foreign language:
(1) **German** (4 hours) **or**
(2) **Spanish** (4 hours).
(b) **Economics of Transport** (1 hour).
(c) **Trade Returns and Trade Journals** (1 hour).

To obtain the diploma of **Licentiate in Accountancy,** which carries with it right of entrance into the Association of Accountants in Montreal (Chartered Accountants), or into the Institute of Accountants and Auditors of the Province of Quebec, the student must satisfy the following conditions:

(a) He must pass all the examinations required for, and leading up to, the Degree of Bachelor of Commerce.

(b) He must pursue the course of studies prescribed in this programme for Accountancy students.

(c) He must comply with all ordinances regulating the practical work to be done by students during the vacation.

(d) He must spend at least one year, subsequent to his obtaining the Degree of Bachelor of Commerce, in the office of a practising accountant.

(e) He must then pass successfully a Final Examination in Accountancy and Auditing before a board of five examiners, composed as follows: the Director-Secretary of the School of Commercial Studies, two Professors of McGill University, a member of the Association of Accountants in Montreal, and a member of the Institute of Accountants and Auditors of the Province of Quebec; or before a board composed of four examiners, in case either of the Associations mentioned fails, after due notice, to nominate its delegate; or before a board composed of three examiners, in case each of the Associations mentioned fails to nominate its delegate.

POLICY OF THE SCHOOL

In all subjects the work will be, as far as possible, of a practical nature. Thus the English courses will include a drilling in letter-writing, precis-writing, and the preparation of reports. The French, German and Spanish courses will aim at imparting facility in speaking as well as in writing, and will consider the special phraseology employed in business correspondence. The mathematical and scientific courses will deal in the fullest manner with applications to industry, commerce, and finance. In the lectures on History, Political Economy, and Commercial Law, the aim will be in the first case to trace the growth and development of modern ideas and institutions; next, to impart a knowledge of those general economic principles which are necessary to a full understanding of other subjects; in the third instance, to give the student such an acquaintance with the law as may be of real service in everyday business transactions. Finally, in Accountancy, the conditions and methods imposed by the increasing complexity of commercial, industrial and financial organizations will be considered in detail.

At the same time it will be among the chief concerns of the School of Commerce to accustom the student to the exercise of independent thought on all subjects, and particularly on those related to industry, commerce, and finance. To this end he will be expected from time to time to analyse his mental attitude towards each subject, to note the bearings of each on all other subjects, and to embody the results of his analysis in an essay or essays. These methods will compel him to call

into play his independent judgment, and will thus assist in developing those qualities of adaptability, self-reliance, and resourcefulness that make for leadership.

FEE FOR COURSE.

The sessional fee is that of the Arts course, namely $58.00. At the request of the students themselves, and by the authority of Corporation, an additional fee of $10.00 will be exacted for the support of the Literary Society, the Undergraduates' Society, the Canadian Club, the Union, the "McGill Daily," and Athletics.

COURSES OF LECTURES.

English.

The fundamental purpose of the course in English is to train students to deal with such problems of expression as arise in commercial life. Considerable attention will be given to business correspondence and other forms of commercial writing. The interests of students, however, are best served, even for these special purposes, by a more general training in English. These courses will therefore include practice in various kinds of writing, as well as some study of modern English literature. As far as possible the writing prescribed for students will be related to the work they are doing in other classes.

The following is a brief outline of the work :—

FIRST YEAR.

Informal lectures on various aspects of English Composition, e.g., choice of words, sentence-structure, punctuation, selection and arrangement of material; letter-writing and business correspondence; discussions of a few representative works of modern English.

SECOND YEAR.

Continuation of work of the first year. Writing of reports; study of contracts and other commercial documents; essays dealing with the subject-matter of courses on Business Organization, Economics, History of Commerce.

THIRD YEAR.

In this year the student, while continuing the work begun in the first year and carried on into the second, will be further required to write a series of essays involving research work.

French.

The study of French will be first approached from the literary side, both in order to increase its value to the student as an element of culture

and in order to afford a sufficient back-ground for the commercial studies which are to come later. These commercial studies will begin in the second year and will comprise about half of the work done in that year. In the third year the work will be almost entirely of a commercial character.

The following is a synopsis of the work:—

FIRST YEAR.

The student will have a choice between:

(a) The Advanced Arts Course in French, as indicated on page 130; and

(b) The Ordinary Arts Course in French (see page 130) strengthened by tutorial class work.

SECOND YEAR.

In this year the work will be divided into two sections:—

I. A selected Arts course. (See page 131).
II. Work of a commercial nature, embracing:

Commercial Correspondence:—Letters of introduction, offers of services, inquiries, acceptance of offers, execution of orders, circulars, invoices and account sales; study of trade reports and commercial documents; study of contracts.—Bills of sale, mortgage deeds, bills of lading, charter-party, insurance contracts.

THIRD YEAR.

During this year one hour a week will be devoted to a study of modern French literature. The remaining 3 hours will be taken up with commercial work, which may be conveniently divided into:

(a) Commercial Correspondence, study of trade reports, etc., in continuation of work begun in the second year; and (b) Colloquial French.
(The text-book to be used for this part will be P. Clerget, Manuel d'economie commerciale.)

The students will be called upon to take part in discussions, which will follow addresses to be delivered by French speakers on commercial and industrial subjects. Visits, too, will be organized to French commercial and industrial establishments, and all explanations during these visits will be given in the French language.

Class instruction in the three years will be given in French.

Spanish.

The work in Spanish will be divided into three sections:—

(1) A course in grammar, reading and composition, with the use of prescribed books;
(2) A course in commercial correspondence;
(3) A general business course, comprising a study of a number of commercial documents and legal instruments.

Mathematics.

FIRST YEAR.

In this year the work will be that prescribed for First Year Arts students and will afford a sound training in general mathematics.

SECOND YEAR.

The second year work will be divided into two portions, as follows:

I. Commercial Mathematics, embracing:—
contracted methods of multiplication and division; use of the slide rule; use of logarithms; general theory of interest and discount; annuities; the amortisation of bonds.

II. Analytical Geometry with special reference to graphic methods.

THIRD YEAR.

This year will be devoted to a study of the principles of the infinitesimal calculus and its application to the work of the two preceding years.

This three-year course in mathematics will provide an excellent basis or starting-point for those who wish to study actuarial science and enter the actuarial profession.

Accountancy.

The accountancy work has been carefully graduated and correlated, and is intended not merely to fulfil its part in a general scientific business training but also to prepare and assist those who purpose taking up accountancy as a profession.

No previous knowledge of bookkeeping is assumed or required; the subject is developed rapidly along the lines that prevail in practice.

FIRST YEAR.

The following plan will give a good indication of the ground covered in this year:—

The principle of debit and credit; books of original record, how they should be kept, and how utilized; documents employed in connection with them; sales, purchases, consignments, and how to handle them; returns inwards and returns outwards; subsidiary ledgers, and controlling

accounts to represent them in the general ledger; special forms of cash-book required to facilitate such control; notes and drafts, discounting and renewal of notes, and the proper methods of treating these operations in the accounts; single entry, how to change to double entry, and vice versa; distinction between revenue and capital expenditure; income statement and balance sheet; single proprietorships and partnerships.

The student will be required to sift and classify his detail, write up all the books of record and account mentioned, and focus results of the various transactions or operations into the final statements.

SECOND YEAR.

The subject matter for this year will be as follows:—

Special Problems that occur in connection with Partnerships —The deed of partnership; rights of partners; effects of dissolution; methods of distributing profits; the bringing in of other partners; goodwil; transformation of a firm into a corporation; Departmental Accounts: Organisation and records required; sectional balancing of ledgers and systems of internal check; analysis of expenses; distribution of expenses over departments; results in each department; comparison of these results with those shown in other periods; Manufacturing accounts: the elements of cost accounting; records to take care of purchases; the voucher systen; depreciation and methods of providing for it; allowances and reserves; sinking funds.

THIRD YEAR.

The work of the third year will embrace:—

(a) Theory of the Balance Sheet; Its form and elements; valuation of these elements; comparative balance sheets; double account system of balance sheet; the income statement.

(b) Corporation Finance: Development of the corporation; status and interior organization of the corporation; how to incorporate; promotion and underwriting; stock and bond issues; temporary loans; initial operations; earnings and their disposition; secret reserves; betterments surplus; control exercised by directors and majority stockholders; its abuse; consolidations; insolvency and receiverships; re-organizations; different bases of capitalization.

Problems connected with Stock and Bond Issues: bonus stock; treasury stock; watered stock; discount and premium on bond issues.

(c) Branches, Consolidations, Mergers: Accounts of head-office and of branches; consolidated statements and balance sheets; control of stock and bond issues; minority holdings; advances to subsidiaries; inter-company profit; capital assets and capital liabilities; initial surplus and goodwill.

(d) Cost Accounting: General considerations, the advantages of a costs system; the control of stores, purchasing and issuing, the running inventory; quality, remuneration, and control of labour; overhead expenses

or "burden,' methods of distributing it and their limitations; waste and leakage in factories; idle time; calculation of machine rates; connection of costs records with general accounts.

(e) Accounting in Insurance Companies: Sources of income; expenditures to be incurred; registers and their uses; control of agents; reserve and its constitution; sources of profit; presentation of accounts; indications of strength or of weakness.

(f) Bank Accounts: Classification of operations; sources of entries in books; registers, diaries, ledgers; correlation of departments; cash journal or daily summary; published accounts.

(g) Municipal Accounts: Principles involved; current methods of reporting statistics; inadequacy of these methods; methods now recommended; sources of revenue; estimated revenue; appropriations; balances; various forms of municipal debt; municipal bonds; contract and order liabilities; sinking-funds; form of balance sheet recommended.

(h) Insolvency Accounts: Various schedules adopted; statement of affairs; realisation and deficiency account; deficiency statement.

(i) Trustees' Accounts: Executorships and administratorships; accrued claims; accrued expenses; corpus and income.

(j) Peculiarities in the form of accounts required in other undertakings will also be dealt with.

(k) Auditing: General principles applicable to all undertakings; special considerations applicable to particular concerns; laboratory practice in auditing.

Economics.

FIRST YEAR.

Elementary Economics:—A discussion of the elementary principles of Economics, including an analysis of the production, exchange, distribution and use of wealth.

SECOND YEAR.

Industrial History:—An account of the development of industrial organisation since the Industrial Revolution for the purpose of showing the extent and manner of the changes in organisation during and since the 19th century. Particular attention will be directed to the changed and changing relations between capital and labour and the problems connected therewith.

THIRD YEAR.

Economic Institutions:—A description of the principal economic institutions, such as capitalists' associations, trade unions, railways, banks, etc., with particular reference to Canadian conditions.

Business Organisation and Scientific Management.

A course of lectures extending over the second and third years and dealing with the following subject-matter:

I. Commercial Organisation: Development of organisation; study of markets; organization of an export business; sources of information; consular service; fundamental principles of banking and exchange; study of the various problems connected with distribution; the purchasing department; the sales department; the credit department; the traffic department; advertising; organisation of accounts; preparation of periodical reports.

II. Industrial Organisation: The launching of an industrial enterprise; the planning of a factory; departmental functions; the purchase and control of raw materials; labour, and its control; wage systems; welfare work; power and its transmission; the reorganisation of a factory; the committee system; the location of industries; principles of management; types of management; departmental relations; standardisation and equipment; standardised operations; written standard-practice instructions; adequate records; efficiency rewards.

The student will be required to write in idiomatic English a summary of each lecture.

Economic Geography.

Course extending over the first two years.

General.

The solar system; epochs in the history of the earth; divisions of the surface of the earth into land and water; notions of geology; effect of the sun's heat and rays; effect of altitude; effects of moisture, temperature, and winds; movements of the sea; the great ocean currents; mankind, the different races and their characteristics; distribution of natural products; centres of population, and reasons why they have developed; trade; chief commercial products, their production, and distribution; chief traffic movements.

Canada.

General configuration of Canada,—mountains, seas, lakes, rivers; climatic conditions; natural products of Canada,—products of agriculture and the farm, products of the mine, products of the sea and rivers; population centres, their history and growth.

Canadian Products:—

(1) For home consumption: (a) to satisfy the needs of the population, (b) as raw materials in industry; location of the important industries, reasons for such location; markets available; means of distribution, roads, canals, rivers, railroads; cost of distribution; possible improvement and development of established industries; creation of new industries and markets.

(2) For exportation: (a) raw materials, (b) manufactured products,—to what countries exported, and how used in those countries;

General study of Foreign Markets:—distance, climate, population; habits; credit; currency; stability of government; customs tariff; competition; transport facilities.

Importation:—

Products imported; from what countries imported; for what purposes employed,—(a) for direct consumption, (b) as raw material for industry; special reference to raw materials exported from Canada that come back in the form of manufactures.

Economics of Transport.

This course deals with the following subject-matter:

Water Transportation: Ocean shipping; services, rates, and organisation; shipping and navigation policies of the leading commercial nations; lake, river, and canal transportation in Canada and the United States.

Railway Traffic: Organisation and service of the traffic department; systems of rates; traffic problems, such as car service, demurrage, and claims ; legislative regulation of operations.

Trade Returns and Trade Journals.

This study will include an analysis of Board of Trade returns, consular reports, and other sources of information on trade and commerce.

Investments.

A course of lectures dealing with: The nature and variety of securities; government stocks and bonds; municipal bonds; railroad securities; corporation stock and bond issues; real estate mortgages; analysis of financial reports; tests of investments; care of investments; the Stock Exchange market; investment by banks, trust companies, and insurance companies.

History of Commerce.

A review of the history of commerce from the dawn of civilisation to modern times, tracing the influence of physical, economic, political, and technical factors in its development.

Drawing.

FIRST YEAR.

Outline of course:—

A training of the student to handle the pencil freely in making sketches or simple drawings of things; the execution of sketch plans and side and

end elevations, properly arranged in relation to one another so as to display parts and proportions; instruction in dimensioning; exercises in geometrical drawing, the making to scale of ruled drawings, drawings by the method of perspective projection commonly in use among architects; practice in making diagram drawings, descriptive of general arrangements and of mechanical actions and appliances; instruction in tracing, transferring and blue-printing; practice in simple types of freehand lettering, especially such lettering as might be found useful in office work; an introductory study of architecture, including simple exercises in the building and construction of floors, partitions, etc., with a consideration of the principles of good taste, in the matter of proportion and execution, as applied to doors, windows, office furniture, etc.; a study of general principles in art, with special reference to form, colour harmony, and ornament. Exercises in simple design.

THIRD YEAR.

Special course in the third year for students interested in manufacturing.

This course is intended as an introduction to the principles of machine construction. The student will be shown the different methods in which machinery may be arranged, the relative efficiency of each method, and the various structural and other conditions that must be provided for. The work will include an intelligent sketching of machinery and mechanism in the workshops—the Machine shop, the Patternmaking and Carpentry shop, the Smithy, and the Foundry, and in the mechanical and electrical laboratories of the Science Faculty.

Banking.

A course of special lectures on banking practice for Third Year students.

Insurance.

A course of special lectures on Insurance for Third Year students.

Technical Shop Work.

A course, or part of a course, given in the Department of Mechanical Engineering, and consisting of:

(a) work in joinery shop for one afternoon a week during the first term; (b) work in smithy, foundry, or machine shop (selection to be at the discretion of the Department) for one afternoon a week during the second term.

Materials of Construction.

A course of one hour a week during the session, given in connection with the Civil Engineering Department.

Metallurgy.

A course of 2 hours a week during the first term, given in connection with the Department of Metallurgy.

Visits to Typical Industries.

From 8 to 10 visits will be made during the session to typical industries. Such visits will be under the guidance of a competent demonstrator, and may, in each instance, if deemed advisable, be preceded by an explanatory lecture.

EXTENSION CLASSES.

The Extension Classes are open to the public, no examination test being required. They embrace (a) subjects that form a part of the curriculum, and (b) subjects that lie outside this curriculum. At the conclusion of each session written examinations will be held, and special certificates will be awarded to successful students.

Civil Service students and those preparing for the examinations held in connection with the Institute of Secretaries, London, England, and with the Association of Accountants, Montreal, will find some of these classes especially useful. The programme of classes, as organized for 1919-20, together with the scale of fees, hours of lecture, etc., is as follows:—

(A) SUBJECTS THAT ENTER INTO THE DIPLOMA CURRICULUM.

Chemistry.

A. The Chemistry of Everyday Things.

A course of about 20 lectures, dealing in a simple way with the chemistry of air, water, fuels, foods, metals, etc., and designed to bring out the fundamental principles involved in the more important chemical processes that are carried out in the home and in chemical works.

The lectures will be profusely illustrated by specimens, experiments, lantern slides, and diagrams.

Wednesdays and Fridays, at 7.30 p.m. Fee for the course, $5.

Professor Evans.

B. Industrial Chemistry.

A course of 25 lectures, given after the Christmas holidays, on the important industrial processes involving chemistry. Only those processes which are represented in Canada will be discussed.

These lectures will be given by a number of chemists and engineers, each an expert in the subject on which he will lecture, and they will not necessitate, for their proper comprehension, any special knowledge of chemistry on the part of the student.

The planning and arrangement of the course has been placed in the hands of Mr. C. R. Hazen, M.Sc., of the firm of Milton Hersey & Co.,

and its scope and importance will be indicated by the outline, given below, of the work covered last session.

Wednesdays and Fridays at 7.30 p.m. Fee for the course, $5.

Outline of course given in the session of 1918-19:

1.—Water, its industrial uses and purification.....C. Hazen.
2.—Apparatus & Machinery used in the chemical industries....Dr. Bates.
3.—Solid Fuel Coal, ash & peats, powdered coal.....Dr. Porter.
4.—Liquid Fuel, crude petroleum and its products.....Dr. Porter.
5.—Sugar.....C. F. Bordarf.
6.—Lead and its alloys.....H. Roast.
7.—Iron.....G. W. Dauncey.
8.—Steel..... " "
9.—Fats & Oils, their orgin, composition and uses as foods, etc.....Dr. R. F.Ruttan.
10.—Leather Tanning.....T. A. Faust.
11.—Dyes & Dyeing.....W. R. Allen.
12.—Ethyl Alcohol and Distilling.....G. M. Appell.
13.—Pulp.....J. N. Stephanson
14.—Paper..... "
15.—Sulphuric, nitric acid and atmospheric.....Dr. R. McLean.
16.—Explosives..... "
17.—Starch Dextrine & Glucose.....Dr. R. F. Ruttan.
18.—Portland Cement.....C. A. Tagge.
19.—Glass.....Percy Cole.
20.—Fertilizers and Glue.....C. Hazen.
21.—Paints and Colors.....Geo. M. Edwards.
22.—Varnishes..... " "
23.—Electro Metallurgy.....Dr. A. Stansfield.
24.—Coal Gas.....R. Kennedy.
25.—Ethyl Alcohol and its Products.....H. C. Shuck.
26.—Distillation of Wood and its Products.....C. Hazen.
27.—Textiles.....

Spanish.

A course of 40 lectures, intended for beginners.

With the aid of a suitable grammar and text-books, the student will be first taught to read in Spanish and to translate, with a view to his acquiring a correct pronunciation and a vocabulary. When the latter is deemed sufficient for the purpose, conversational practice will be introduced on current topics or on the subject-matter of the text-books.

It is hardly necessary to dwell on the advantages a knowledge of Spanish would possess for those who may be called upon to enter into business relations with Spanish America.

Mondays and Wednesdays, at 8-15 p.m. Fee for the course, $10.

Mr. Sugars.

Commercial Law.

A course of 25 lectures on the general principles of commercial law, specially designed to render service to the business man, banker, and accountant in their everyday transactions, and to help students who may be preparing for any of the examinations held in connection with the Association of Accountants in the Province of Quebec.

The subject is taken up from a practical point of view, with illustrations from actual cases, and the lectures deal with the questions that are likely to arise in the ordinary course of business.

The matter treated is as follows:—Persons and their capacity to contract—minors, married women, and other persons whose capacity is limited; the different kinds of property; the general principles of contracts; payment, and other methods in which debts are extinguished; the sale of goods; the lease and hire of property; the lease and hire of services; building contracts; carriers by land and water; agency; hypothec; pledge; contracts of guarantee; bills of exchange and other negotiable instruments; partnership; corporations; banking; rights of creditors over a debtor's property; privileges; insolvency law.

Each lecture lasts an hour and a half, and is complete in itself. The course is open to the public, both men and women.

Tuesdays, at 7.45 p.m. Fee for the course, $10.

Mr. Dale Harris.

(B) SUBJECTS OUTSIDE THE DIPLOMA CURRICULUM.

Political Economy.

A course of 25 lectures, especially intended to meet the needs of candidates studying for the final examination of the Association of Chartered Accountants, candidates for the Civil Service Examination, Division B, junior clerks in banks, and other persons interested in the subject from a practical standpoint.

The following subdivisions will indicate broadly the subject-matter dealt with in these lectures:—

Wealth and its productions; the theory of value; the theory of monopoly price; money; index numbers and the rise in the cost of living; international trade and the foreign exchanges; free trade and protection; distribution—rent, wages, interest, profits and the theory of population; taxation and public finance; social legislation and socialism; the economic aspect of the war.

Thursdays, at 7.30 p.m. Fee for the course, $5.

Professor Leacock.

Algebra.

A course of 25 lectures, which will be found especially useful by Civil Service candidates and by those who desire to pass the examinations

held in connection with the Association of Chartered Accountants. A number of lectures will be devoted to higher arithmetic problems.

Thursdays, at 8.30 p.m. Fee for the course, $5.00.
Associate Professor Davies.

English Composition and Business Correspondence.

A course of 25 double lectures on the general principles of English Composition with especial reference to commercial correspondence, and other kinds of writing that are likely to be serviceable in business life. Such topics as mastery of English idioms, the increasing of one's vocabulary, sentence-structure clearness and force will be discussed. There will be frequent opportunities for practice in writing.

Students in Accountancy offices and those intending to take up secretarial work should derive great benefit from this course.

Friday evenings, from 730 to 9.30 Fee for the course, $10.
Assistant Professor Latham.

Elementary Accountancy.

A series of lectures to be given three times a week, and dealing with the subject-matter outlined on page 156 for First Year Commerce students.

This course is intended for students preparing for the Intermediate Examination held in connection with the Association of Accountants in Montreal, and will be found especially useful by anyone desirous of laying a solid groundwork in Accountancy.

Mondays, from 7.30 to 8.30 p.m., and Wednesdays from 7.30 to 9.30 p.m.
Fee for the course, $10.
Mr. Brimacombe.

Higher Accountancy.

A course of 20 lectures, dealing with the following subject matter:—

Business Organizaton and Corporation Finance: The classification of business enterprises; the development of the corporation; different corporation securities, their nature and uses; premium and discount on bonds; the amortization of bonds: promotion; underwriting bonus stock; treasury stock; watered stock; the stock market; extensions and reorganizations.

Theory of the Balance Sheet: Capital assets; fixed assets; intangible assets; permanent investments; investment of reserves; working assets; current assets; capital stock; fixed liabilities; bonds and mortgages; contingent liabilities; current liabilities; profits; surplus and reserves; secret reserves; the sinking fund; comparative baance sheets; the consolidated balance sheets

Manufacturing Accounts: General considerations; the advantages of a costs system; the control of stores; purchasing and issuing, the running inventory; quality, remuneration, and control of labour; overhead expenses or "burden," methods of distributing it and their limitations; waste and leakage in factories; idle time; calculation of machine rates; connection of costs records with general accounts, special records required, the voucher system; accounts of trusteeships and executorships; accounts of municipalities.

Wednesdays at 7.15 p.m. Fee for the course, $10.00.

English Literature.

French novelists from 1830 to 1914, covering the periods of Romanticism, Realism, and the return to Idealism, as illustrated in leading writers of contemporary fiction. The lectures will be critical, rather than biographical. The works of Brunetière, André Le Breton, and Saintsbury will be used in connection with this course. One lecture a week throughout the session.

Fridays at 5 p.m. Fee for the course, $5.00.
Professor Lafleur.

Payment of Fees for Extension Courses.

Fees for Extension Classes should be paid at the Bursar's office before the session begins. For the convenience, however, of those who may be unable to get to the University during business hours, a person authorized to collect the fees will attend at the lecture hall about the beginning of the course. All fees must be paid by the evening of the third lecture, and in no case shall any fee be returned.

DEPARTMENT OF SOCIAL SERVICE.

SESSION 1919-20.

DIRECTOR:—MR. J. HOWARD T. FALK.

The importance of social work cannot be estimated in terms of dollars and cents but the magnitude of the effects of social mal-adjustment and the problems created thereby, with which social agencies contend, would be realized if we could obtain accurate statistics as to the direct money cost of caring for defectives, delinquents and dependents. A conservative estimate of this money cost for the Dominion would be fifteen million dollars per annum; the share of the Province of Quebec can hardly be less than three millions.

The indirect money cost in loss of production no one could estimate; over and above material considerations of this nature, and infinitely more appealing as a motive for intelligent action comes the realization of untold and unnecessary human misery.

The war has shattered many ideas, which in pre-war days had been accepted as indisputable facts determined by unchangeable economic laws; the Mother Country, as was natural by virtue of her greater danger and greater sacrifice during the war, has been quicker to realize the necessity for radical changes in our social order.

The war put a premium on man power not for a few months, as during a period of unusual prosperity, but for four long years, and the situation revealed the fact that the man power of the Mother Country had been largely reduced by bad social conditions. Mr. Lloyd George summed up the situation in one terse sentence: "You can't have an A-1 nation with a C-3 population." We in the Dominion must squarely face this fact.

Social agencies are mostly engaged in dealing with the C-3 part of a population. Their success depends upon their ability to prevent people from sinking into the C-3 class as well as on their ability to raise people from the C-3 class to a higher rating; this is no mean task. History shows that long ago the problem was too much for private philanthropic effort from a financial standpoint, but the introduction of public effort did not improve the quality of the workers or the work done. In the last five years English speaking countries have increasingly recognized the fact that the best intentioned efforts are often fruitless owing to the inexperience and lack of general and special education of those engaged in social work. Following the example of many British Universities and even a greater number of American Universities and of the University of Toronto, McGill has developed a training school for social workers under its Department of Social Service.

Various types of Students.—A preliminary examination of social agencies in Montreal reveals the fact that Boards of Management have not generally demanded trained workers. To create this demand opportunity must be given to the busy men and women of Montreal who serve on such boards, to learn the fundamental principles of social work and the elements of all social problems and the most modern methods employed to meet them. For this purpose the Department offered last session

and will continue to offer yearly, an extension course entitled "Social Problems, Methods and Agencies."

Theological students will take in consultation with their respective College Professors one or more of the regular courses of the Department.

The full year certificate course is intended for students giving their full time to preparation for social work. Whilst it is expected that the majority of students taking the full certificate course will take up social work as a paid profession, volunteers will be encouraged to take the full course in preference to becoming partial students.

Qualifications.—It is better to frankly state an opinion which represents the majority in this respect than to encourage or allow people to take training for whom no opening is likely thereafter. Training may make a social worker efficient, but in social work as in much other work it is the human qualifications which distinguish the effective from the ineffective. The success of a social worker is largely dependent upon personality, therefore tact, patience, sympathy, poise, cheerfulness and that something which we may term "religion" and which "calls" a person into social work may be considered the pre-requisites of an embryo social worker.

At the present time it seems unwise to make any hard and fast rules as to scholastic qualifications, but, in general, intending students will be expected to have attained matriculation standard.

The following subjects will form the basis of Lecture Courses for the One Year Certificate Course:

1. Heredity and Environment
2. The Treatment of Poverty
3. Child Welfare
4. Public Hygiene
5. Crime and Delinquency
6. Social Legislation
7. The Social Aspects of Disease
8. The Social Development of a Community
9. Social Statistics, Research and Surveys
10. Business Principles in Social Work

It is hoped that it may be found possible to arrange for lectures in the Economic Theory of Social Reform, The Industrial History of Modern Times and The Ethics of Social Questions and Social Psychology, for the benefit of students who are not graduates of a university.

Inspection and Field Work.—Visits to typical institutions and organizations will be arranged during the year, but the most important work required of students will consist of actual service in connection with one or other of the organizations of the city. Four mornings per week will be required of all certificate students in field work in addition to inspection visits.

Hours.—To enable students already engaged in social or other work to take some of the courses, an endeavour will be made to fix 5.00 p.m. as the lecture hour for courses.

Fees.—The fee for the full certificate course is $35.00.

The fee to partial students for single courses is $5.00 for a year course and $2.50 for a term course.

Scholarships.—A fund of $1000.00 is at the disposal of the Committee. A scholarship of $500.00 is offered to graduates of any university desiring to take the full Certificate Course. Applications must be made in writing to the Director before September 1st, 1919. The Scholarship will be awarded to the graduate who, in the opinion of the Committee, gives best proof of becoming an effective social worker and who would, without the assistance of the scholarship, be unable to take the course.

At the same time a sum of $500.00 will be awarded by the Committee to one or more students in the form of bursaries. Application for assistance from this bursary fund should be made to the Director not later than September 1st, 1919.

Further information can be obtained from the Director in interview by appointment during May and June and during the last two weeks in September. Written enquiries will receive attention at all times, but interview is considered preferable.

The University Settlement is somewhat loosely associated with the work of this Department. The officers of this organization for the year 1918-19 were as follows:—

President—Arthur M. Irvine.
Vice-President—Prof. J. A. Dale.
Recording Secretary—Miss M. M. Wherry.
Corresponding Secretary—Miss E. C. Longworth.
Hon. Treasurer—K. R. Schofield.
Joint Hon. Treasurers, Milk Station—J. Arthur McBride and W. B. Somerset.

Executive.

Miss I. Brittain
Miss A. G. Jarvis
Miss E. Dumaresq
Dr. W. A. L. Styles
Miss M. Going
A. Huntley Duff
Mrs. W. B. Somerset
Major A. K. Haywood
Dr. Milton Hersey
C. A. Mullen
Mrs. A. W. Wakefield.

Finance Committee.

A. M. Irvine
Dr. Milton L. Hersey
K. R. Schofield
A. Huntley Duff.
W. B. Somerset

Resident Workers.

Miss Bella Hall
Miss Gladys Ross
Miss Frances Caplan
Miss L. Drew (Milk Station)
Fred McCan

FACULTY OF APPLIED SCIENCE.

DEGREES.

The degrees conferred by the University upon such undergraduates of the Faculty as fulfil the conditions and pass the examinations hereinafter stated are "Bachelor of Architecture" (B.Arch), and "Bachelor of Science" (B.Sc.), mention being made in the diplomas of the latter of the particular course of study pursued.

Students who take the Bachelor of Science degree in one of the courses provided by the Faculty may graduate in any of the remaining courses by attending one or more subsequent sessions and passing the prescribed additional examinations.

Students who wish to obtain the degrees of B.A. and B.Sc. (Applied Science) in six years, will spend the first three years in Arts before attending any classes in Applied Science, except in the summer courses referred to below; they will then enter the Faculty of Applied Science and devote the remaining three years entirely to the work of this Faculty. The special summer courses mentioned take the place of the work in descriptive geometry, drawing (freehand and mechanical) and shopwork, which form part of the regualr course of the first year in Applied Science. This work must be taken in two periods of one month each (in the month of September), prior to the regular work of the second and third years in the Faculty of Arts; and must not be taken during the regular session in any of the three years spent in that faculty.

Every student who intends to take this double course must notify the Dean of the Faculty of Applied Science to this effect, on or before the close of his first year in Arts (May 1st), and must pay the fee of $50.00 to the Bursar, for the first of his summer schools, before 1st September following.

By a resolution of the Institution of Civil Engineers (England) the holders of the degree of B.Sc., in the courses of civil, electrical, mechanical and mining engineering, who are desirous of becoming associate members of the Institution, may under certain conditions be exempted from the examination prescribed for admission to the Institution.

EXAMINATIONS.

1. Final examinations are held in all lecture subjects. Class examinations, for which credit may be given in the sessional standing, are held from time to time, at the option of the professor.

2. Students who have failed in one or more subjects of the curriculum shall be required to make good their standing by passing:—

(1) The regular supplemental examinations held immediately before the opening of the session, *or*
(2) The final examinations in a subsequent session, *or*
(3) Special examinations, which shall be given only under exceptional circumstances and by authority of the Faculty.

3. No undergraduate will be allowed to take instruction in any subject until he has passed the examinations in the necessary prerequisite subjects, for particulars regarding which see page 233.

4. Failures in drawing room and laboratory subjects may under certain conditions be made good by attendance on special classes during the afternoon of the first six weeks of the following session.

SCHOLARSHIPS, PRIZES AND MEDALS.

See pages 78 to 81.

FEES.

See page 86.

ENGINEERING SOCIETIES.

1. The headquarters of the Engineering Institute of Canada are located in Montreal. Students in all departments of engineering are strongly recommended to become student members of the Institute, which they can do on payment of a fee of $3.00. They are then entitled to the "Transactions," which are published annually, to the monthly journal of the Institute, and to the use of the Institute's rooms, 176 Mansfield Street. They also have opportunities of meeting the prominent engineers of the country, and of being present at the fortnightly sessions, at which papers are read on current engineering subjects and works of construction.

Students are invited to compete for the prizes which are offered by the Institute.

2. Students in Mining and Metallurgy are strongly recommended to become members of the McGill Mining Society, which, although a student body (see page 228), is affiilated with the Canadian Mining Institute, the headquarters of which are in Montreal. Members of this Society receive the Monthly Bulletin and the Transactions of the Institute without extra expense, and are entitled to attend all meetings and to compete for the prizes offered.

COURSES OF INSTRUCTION.

The instruction in this Faculty is designed to afford a thorough training of a practical as well as theoretical nature, in the following branches of applied science:—

I.—Architecture.
II.—Chemistry.
III.—Chemical Engineering.
IV.—Civil Engineering and Surveying.
V.—Electrical Engineering.
VI.—Mechanical Engineering.
VII.—Metallurgical Engineering.
VIII.—Metallurgy.
IX.—Mining Engineering.

Military Instruction (subject No. 400) may be given as alternative to certain subjects in connection with courses III. to IX, inclusive (see pages 176 to 189).

DETAILED CURRICULUM.

The regular work of each session in Applied Science will end about the 1st of May, at the close of the sessional examinations. The summer work will be taken during the month of September (see page 190).

The curriculum, as laid down in the following pages, may be changed from time to time as deemed advisable by the Faculty. The work prescribed for the first two years is the same in all courses, except in the Chemistry and Metallurgy Courses, and in that leading to the degree of Bachelor of Architecture (Courses I, II and VIII).

The first two years of the engineering courses (III to VII and IX) are mainly devoted to mathematics, mechanics, physics, chemistry, drawing and shopwork, as it is deemed necessary that students in these courses should master the general principles underlying scientific work before commencing the subjects of the professional courses.

The subjects of instruction in the engineering courses in these years, and the number of hours per week devoted to each, are as follows:—

FIRST YEAR

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Algebra	192	5	5	..	..	215
Descriptive Geometry	341	1	1	⅔	⅔	209
English	131	2	2	..	..	212
Freehand Drawing and Lettering	342. 343	1	1	⅔	⅔	209
Geometry	191	3	..	..	..	215
Mechanical Drawing	211	..	..	2	2	216
Mechanics	194	2	2	..	..	215
Physics	311	2	2	..	..	229
Physics Lab	312	..	..	1	1	229
Shopwork and Shop Methods	212 to 215	..	..	2	2	216
Trigonometry	193	..	3	..	..	215

All undergraduate students of the first year, except those in the course of Architecture, who at the close of the first term have failed to obtain an average of 33 per cent, in the following five subjects, viz.:—mechanics, geometry, algebra, physics and descriptive geometry, will be required to withdraw from the Faculty.

In the case of students in the course of Architecture the same rule applies, the five subjects, however, being mechanics, geometry, algebra, physics and architectural drawing.

Any other student of the first, or any subsequent year, whose record is found to be unsatisfactory, may at any time be required to withdraw from the Faculty.

All students of the First Year, except those in the Department of Architecture, who have pursued their course of study without serious interference due to personal illness, domestic affliction or urgent affairs, and who fail in more than three subjects, at the end of the First Year, or in three subjects aggregating over 400 possible marks, shall be required to repeat all the work of the First Year, and while so doing shall be debarred from taking any more advanced work.

SECOND YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Anal. Geometry	197	3	..	..	..	215
Calculus	198	3	3	..	..	216
General Chemistry	51	3	3	..	..	200
General Chem. Lab	52	..	..	1	1	201
Graphical Statics	82	..	..	..	1	204
Mapping	348	..	..	1	1	230
Materials of Construction	81	1	1	..	..	204
Descriptive Geometry and Perspective	345	1	1	⅔	⅔	209
Mechanics	83	..	3	..	..	204
Mech. of Machines	218	1	1	⅔	⅔	217
Physics	315	2	2	..	..	229
Physics Lab	316	..	..	1	1	229
Shopwork and Shop Methods	220, 221	1	1	1	1	217
Surveying	346	2	2	..	..	230
Surveying Field Work	347	..	..	..	..	230
Summer Reading	132	..	..	..	..	191

NOTE—Surveying field work, 4 weeks, beginning September 2nd, 1919. See pages 190 and 230.

For other summer work see page 190.

I. ARCHITECTURE.

The course for the degree of Bachelor of Architecture extends over five years. Full information is given in the Announcement of the Department, which will be sent to interested persons upon request to the Registrar of the University.

Besides work in the Department of Architecture proper, teaching is provided in the Faculties of Arts, Law and Medicine.

The work of the first year is similar to that of the first year in Applied Science, but special instruction is given in Drawing and Architectural Geometry.

The object of this curriculum is to impart such general culture, scientific knowledge and skill of hand as will prepare the student to profit by the work of the succeeding years, under the heads of:—

(*a*) Design; (*b*) Aesthetic; (*c*) Archæology; (*d*) Science; (*e*) Construction; (*f*) Professional Practice; (*g*) Drawing.

An essay on an historical or theoretical subject is required in each term from all students following the historical or theoretical courses.

In all courses studio work goes hand in hand with oral teaching, with a view to the practical application of the theory, while at the same time

affording opportunity for the acquisition of power in draughtsmanship and practice in design.

An arrangement has been concluded between McGill University and the Province of Quebec Association of Architects, whereby holders of the Bachelor of Architecture degree are admitted to practice in the Province after spending one year in the office of a member of the Association, and passing an examination in design, instead of having to take the regular prescribed entrance examinations. The office experience may be gained by working in the summer vacations.

FIRST YEAR.

SUBJECT	Subject Number	Lectures per week		Draughting Room and other periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
General History	Arts (13)	2	2	..	..	126
English	131	2	2	..	..	212
Algebra	192	5	5	..	..	215
Geometry	191	3	..	..	..	215
Trigonometry	193	..	3	..	..	215
Mechanics	194	2	2	..	..	215
Physics	Arts (42)	2	2	..	..	197
Physics Lab	Arts (43)	..	..	1	1	197
Elements of Architecture	5	1	1	..	..	195
Architectural Geometry	18	1	1	..	..	199
Architectural Drawing	31	..	..	2	2	199
Freehand Drawing	36	..	..	2	2	199

SECOND YEAR

Design 1	1	..	..	2	2	195
Elements of Composition	6	1	1	..	..	195
Building Construction	24	1	1	..	..	198
Building Details	25	..	..	2	2	198
Structural Engineering I	26	2	2	..	..	198
Struct. Eng. (Draughting) I	27	..	..	1	1	198
History of Classic Architecture	14	2	2	..	..	197
Graphical Statics	82	..	1	..	..	204
Surveying	346	2	2	..	..	230
Mapping	348	..	..	1	1	230
Architectural Drawing	32	..	..	1	1	199
Freehand Drawing	37	..	..	2	2	199
Summer Work	48	..	..	..	..	200
Surveying Field Work	347	..	..	..	..	230
Architectural Essay	44	..	..	..	..	200

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Draughting Room and other periods per week		For detail see pages
		First Term	Second Term	First Term	Second Term	
Design 2	2	..	..	3	3	195
Theory of Design*	7	1	1	..	..	196
Structural Engineering, II	1	1	..	..	198
Struct. Eng. (Draughting) II.	29	..	..	2	2	198
History of Mediaeval or Renaissance Archt.†	15 or 16	2	2	..	..	197
Ornament and Decoration‡	9and 10 or 11 and 12	1	1	1	1	196
Perspective	19	..	..	1	1	199
Freehand Drawing	38	..	..	1	1	199
Architectural Drawing	33	..	..	1	1	199
Summer Work	48	..	..	..	..	200
Architectural Essay	45	..	..	..	..	200

FOURTH YEAR.

Design 3	3	..	..	5	5	195
Theory of Planning*	8	1	1	..	..	196
History of Mediaeval or Renaissance Architecture	15 or 16	2	2	..	..	197
Ornament and Decoration	9 and 10 or 11 and 12	1	1	1	1	196
Hygiene	22	2	..	..	..	198
Heating and Ventilation	23	..	1	..	1	198
Architectural Drawing	34	..	..	1	1	199
Freehand Drawing	39	..	..	1	1	199
Modelling	40	..	..	1	1	199
Architectural Essay	46	..	..	..	..	200
Summer Work	48	..	..	..	..	200

FIFTH YEAR.

Design 4	4	..	..	8	8	195
Modern Architecture	17	2	2	..	..	197
Professional Practice	30	2	2	..	..	198
Engineering Law	175	1	1	..	..	214
Historical Drawing	35	..	..	1	1	199
Modelling	41	..	..	1	1	199
Architectural Essay	47	..	..	..	..	200
Summer Work	48	..	..	..	..	200

†The courses on Mediaeval and Renaissance Architectural History, numbers 15 and 16, are given in alternate years.

During the Session 1919-20, the History of Renaissance Architecture will be given.

‡Ornament and Decoration courses, numbers 9 and 10, and 11 and 12, are given in alternate years. During the Session 1919-20, numbers 9 and 10 will be given.

For summer reading see page 191.

*The courses on Theory of Design and Theory of Planning, numbers 7 and 8, will be given in alternate years.

II. CHEMISTRY.

The course in Chemistry is arranged to give the student in the first two years a thorough knowledge of the fundamental principles of chemistry and physics, with sufficient mathematics to enable him to understand the theoretical parts of these subjects.

In the two subsequent years chemistry (inorganic, organic, analytical and physical) is taught both in its purely scientific aspects and in its relations to the various departments of commercial work. In the fourth year, students will specialize in either (a) inorganic *or* (b) organic chemistry, as indicated in the tabulated statement below. Special facilities are afforded for the presentation of graduate research work in various branches of chemistry.

FIRST YEAR.

As in Engineering Courses. For details, see page 170.

SECOND YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Analytic Geometry	197	3	..	..	..	215
Calculus	198	3	3	..	..	216
General Chemistry	75	4	4	..	..	203
Descriptive Geometry and Perspective	345	1	1	⅔	⅔	209
Gen. Chemistry Lab	53	..	..	4	..	201
Inorganic Qual. Anal	54	..	1	..	..	200
Inorganic Qual. Anal. Lab	55	..	..	..	4	201
Materials of Construction	81	1	1	..	..	204
Mechanics	83	..	3	..	..	204
Physics	315	2	2	..	..	229
Physics Lab	316	..	..	1	1	229
Summer Reading	132	..	..	..	..	191

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Economics	171	..	2	..	..	214
Geology, General	141	2	2	⅓	⅓	212
Inorganic Quant. Anal	61	1	.	..	..	201
Inorganic Quant. Anal. Lab	76	..	.	6	6	204
Gen. Elementary Metallurgy	261	2	.	..	..	222
Mineralogy	142	2	2	..	..	213
Mineralogy, Determinative	143	..	..	2	..	213
Organic Chemistry	56	3	2	..	..	201
Organic Chemistry Lab	57	..	.	..	2	201
Physical Chemistry	58	2	.	..	..	201
Summer School Fire Assaying and Metallography	263 & 264	..	.	..	..	223
Summer Essay or Reading	133	..	.	..	..	191

FOURTH YEAR.

Applied Electro-chemistry	70	2	.	..	..	203
Crystallography (opt.)*	151	2	.	1 (opt)	..	214
Engineering Law	175	1	1	..	..	215
Industrial Chemistry, Inorg	68	2	.	..	..	203
Industrial Chemistry, Organic	69	..	2	..	..	203
Physical Chemistry and Lab	66	2	2	2	1	202
Adv. Inorg. Chemistry	72	2	2	..	..	203
Inorganic Laboratory (alt.)	77	*1(a)	.	6(a)	7(a)	204
Ore Deposits (opt.)	148	..	4	..	..	213
Advanced Organic Chemistry	64	2	2	..	..	202
Organic Chem. Lab. (alt.)	65	..	..	5(b)	6(b)	202
Food Chemistry (alt.)	73	..	*1(b)	..	..	202
History of Chemistry	74	..	1	..	..	203
Summer Essay	134	..	..	..	..	192

* Students who elect to take this course will be allowed some relief from Chemical Laboratory.

III. CHEMICAL ENGINEERING.

The aim of this course is to prepare students for positions demanding a knowledge of both chemistry and engineering. The duties of a chemical engineer require him to be conversant with chemical processes, the installation of chemical units, and to understand the construction of buildings, the installation and operation of machinery, etc. Accordingly the course of study combines a considerable amount of engineering with the maximum of chemical training which can be attained without overpressure.

Between the second and third years students taking this course must attend a summer session of four weeks in the chemical laboratories.

In the third year specialization commences, the time being about equally divided between chemical and engineering studies, and in the vacation between the third and fourth years all students must give at least six weeks to work in some chemical industry or to equivalent laboratory work satisfactory to the Professor of Chemistry.

In the fourth year the engineering studies are completed and the chemical studies which predominate are arranged in two alternative courses to meet the requirements of the students who cannot possibly study more than a few of the very varied chemical industries. These alternative courses fall broadly under one or other of two headings:—(*a*) inorganic, (*b*) organic, as indicated in the table below, and one or other of which the student will select. Should a student desire to prepare for an industry which requires more engineering knowledge than is provided in the regular course he may substitute additional engineering subjects for some of the chemical work. Details will be arranged on application to the Faculty through the Professor of Chemistry.

While every effort will be made to supply detailed information as to methods and plan of many of the important industries, and to provide facilities for experimentally carrying out the processes involved, the main aim will be devoted to the study of the principles which underlie economical production.

FIRST AND SECOND YEARS.

As in other Engineering Courses. For details, see pages 170 and 171.

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Economics	171	..	2	..	..	214
General Elem. Metall	261	2	..	..	..	222
Inorg. Quant. Anal	61	1	..	..	..	201
Inorg. Quant. Analysis Lab	62	..	..	3	3	202
Mech. Eng. and Lab	226and228	2	2	1	1	218
Mineralogy	142	2	2	..	..	213
Mineral Deter	143	..	..	2	..	213
*Ore Dressing (opt.)	295	2	2	..	..	225
Organic Chemistry	56	3	2	..	..	201
Organic Chem. Lab	57	..	..	..	2	201
Physical Chemistry	58	2	..	..	..	201
Strength of Materials	87	2	2	..	..	205
Strength of Mats. Lab	88	..	..	..	1	205
Structural Design	90	..	1	..	1	205
Summer School. Inorg. Qual. Anal. and Lab	54 and 55	..	..	..	..	200
Summer Essay or Reading	133	..	..	..	..	191

FOURTH YEAR.

Elements of Elect. Eng	111	2	2	..	..	210
Elect. Eng Lab	112	..	..	1	1	210
**Economics	171	2	..	..	..	214
†Engineering Law (alt.)	175	1	1	..	..	215
†Hydraulics	101	1	..	½	..	207
Industrial InorganicChemistry	68	2	..	..	..	203
Industrial Organic Chem	69	..	2	..	..	203
Phys. Chem. and Lab	66	2	2	1	2	202
Metallography	262	..	..	..	1(a)	223
†Military Science (alt.)	400	2	2	..	1	274
Applied Electro-Chem	70	2	..	..	..	203
Electro-Metal. (opt.)	275	..	2	..	..	224
Electro-Metal. Lab. (opt.)	276	..	..	..	1	224
Fire Assay	263	..	..	1(a)	..	223
Adv. Inorg. Chemistry	72	2(a)	2(a)	..	..	203
Inorganic Laboratory	67	1(a)	..	3(a)	4(a)	203
Advanced Org. Chem	64	2(b)	2(b)	..	..	202
Org. Chem. Lab	65	..	..	4(b)	2(b)	202
Food Chemistry	73	..	1(b)	..	2(b)	202
History of Chemistry	74	..	1	..	..	203
Summer Essay	134	..	..	..	..	192

†Military Science (400) is alternative with Engineering Law (175) and Hydraulics (101). (a) Inorganic alternative. (b) Organic alternative.

*Students taking subject No. 295 may withdraw from this work at the conclusion of the first term.

**The introduction of this course will necessitate a reduction in the time assigned to one or more of the other subjects of the year. Particulars of these changes will be announced later.

IV. CIVIL ENGINEERING.

The courses of study are designed to emphasize the fundamental principles embodied in the study of Mechanics, Strength of Materials, and Hydraulics, while at the same time affording an opportunity of applying these principles to practical problems ranging over as wide a portion as possible of the field covered by the practice of civil engineers. A broad and sound foundation is thus laid for future specialization, either in graduate courses or in actual practice. The outlook of the student is further broadened by courses in Mechanical and Electrical Engineering. In the designing courses special attention is given to the interpretation and critical discussion of specifications as well as to the economical principles involved. Students are recommended to obtain as much practical experience as possible during the summer vacations, and are specially recommended to spend at least one season in a drafting office before the final year.

FIRST AND SECOND YEARS.

As in other Engineering Courses. For details, see pages 170 and 171.

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Economics	171	..	2	..	..	214
Foundations	89	..	1	..	1	205
Geology, General	141	2	2	½	½	212
Hydraulics	97	2	..	..	..	206
Hydraulic Laboratory	98	..	..	1	..	206
Map Projections	351	..	..	1	..	231
Mechanical Engineering	226	2	2	..	..	218
Mech. Eng. Lab	228	..	..	1	1	218
Mechanics	86	2	..	..	..	205
Railway Engineering	92	2	2	..	..	206
Railway Eng	93	..	..	2	2	206
Strength of Mats. and Lab	87, 88	2	2	..	1	205
Structural Design	90	..	1	..	1	205
Surveying	353	2	2	..	..	231
*Surveying Fieldwork	354	..	..	..	..	231
Summer Reading or Essay	133	..	..	..	..	191

FOURTH YEAR.

Bridge Design	96	2	2	2	2	207
Elements of Elect. Eng	111	2	2	..	..	210
Electrical Eng. Lab	112	..	..	1	1	210
**Economics	171	2	..	..	..	214
†Engineering Law (alt.)	175	1	1	..	..	215
Geodesy	359	2	..	..	..	231
Geodetic Laboratory	360	..	..	1	..	232
*Geodetic Fieldwork	361	..	..	..	..	231
†Hydraulic Mach. (alt.)	99	..	2	..	..	207
†Military Science (alt.)	400	2	2	..	1	274
*Municipal Eng	100	2	2	..	1	207
†Railway Engineering (alt.)	102	2	..	..	..	208
Strength of Materials	95	2	1	..	1	206
Theory of Structures	94	1	2	1	2	206
Summer Essay	134	..	..	..	..	192

†Military Science (400) is alternative with Engineering Law (175) and Railway Engineering (102) *or* Hydraulic Machines (99).

*For Surveying Fieldwork (354) and Geodetic Fieldwork (361), see details of Summer Schools, pages 230 and 231.

**The introduction of this course will necessitate a reduction in the time assigned to one or more of the other subjects of the year. Particulars of these changes will be announced later.

V. ELECTRICAL ENGINEERING.

The electrical studies of the third year embrace a consideration of current flow; the principles of electro-magnetism; electrical measurements; the design and performance of electrical machinery.

The fourth year is devoted principally to electrical work, and includes lectures and laboratory work on variable and alternating current phenomena, the principles of action and the design of electrical machinery, electric lighting and systems of power distribution, central station design and operation, urban and interurban railways, hydro-electric power development, electro-chemistry, electro-metallurgy and wireless telegraphy.

Occasional visits are made to electrical works and power plants.

FIRST AND SECOND YEARS.

As in other Engineering Courses. For details, see pages 170 and 171.

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Economics	171	..	2	..	..	214
Electrical Engineering	113	2	2	..	..	210
Electrical Engin. Lab	114	1	1	2⅔	2⅔	210
Calculus	201	1	1	..	..	216
Machine Design	225	2	2	..	..	218
Mechanical Drawing	232	..	..	1	1	219
Mech. Eng. and Lab	223, 226	2	2	2	1	218
Mechanics	86	2	..	..	..	205
Mech. of Machines	224	2	2	⅔	⅔	217
Thermodynamics	229	2	2	..	..	219
Strength of Mats. and Lab	87, 88	2	2	..	1	205
Sum. Reading or Essay	133	..	..	..	..	191

FOURTH YEAR.

Applied Elec. Chem	70	2	..	..	..	203
Electrical Photometry and Illumination	124	2	..	⅔	..	212
Applications of Electricity	123	..	2	..	⅔	211
Electro-Metallurgy	275	..	2	..	..	224
†Electrical Designing	122	2	2	1	1	211
Electrical Engineering	117	3	3	..	..	211
Elec. Eng. Lab	118	..	..	3	3	211
Elect. Light and Power Dist.	120	2	..	..	..	211
Electric Traction	121	..	2	..	..	211
**Economics	171	2	..	..	..	214
†Engineering Law (alt.)	175	1	1	..	..	215
Hydraulics	97	2	..	..	..	206
Hydraulics Lab	98	..	..	1	..	206
Machine Design	243	2	..	..	..	220
†Military Science (alt.)	400	2	2	..	1	274
Physics	320	2	2	..	..	230
Physics Lab	321	..	..	2	2	230
Summer Essay	134	..	..	..	..	192

†Military Science (400) is alternative with Engineering Law (175) and one lecture hour per week of Electrical Design (122).

For summer schools, see page 190.

**The introduction of this course will necessitate a reduction in the time assigned to one or more of the other subjects of the year. Particulars of these changes will be announced later.

VI. MECHANICAL ENGINEERING.

The subjects of instruction in this Department are of interest to students who are likely to take up work connected with—

(*a*) The constructive or manufacturing side of mechanical engineering, including industrial or production engineering; (*b*) steam engineering; (*c*) gas engine and producer work; (*d*) power plant engineering; (*e*) heating and ventilation of buildings and factories; (*f*) aeronautics and aerodynamics.

Courses are given during the third and fourth years in mechanical engineering as applied to questions connected with power installations and prime movers. The earlier portion of this work is supplementary to the instruction given in thermodynamics, mechanics of machines and machine design, and leads up to the more advanced or technical subjects of power plant design, industrial plant design and works organization.

Students in the Department of Mechanical Engineering take systematic work in electrical engineering during the third year.

Instruction in workshop practice is given in each of the four years. This work is of a systematic nature, and is intended to prepare for, but by no means to replace, that practical experience of manufacturing operations on a commercial basis which every mechanical engineer must obtain for himself.

The course in thermodynamics deals more particularly with the theory of heat engines, and time is assigned for additional graphical and experimental work in connection with the subject.

Arrangements are made for occasional visits to power plants and manufactories of importance.

FIRST AND SECOND YEARS.

As in other Engineering Courses (see pages 170 and 171), with additional course in September for second year (page 190).

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Economics	171	..	2	..	..	214
Elements of Elect. Eng	111	2	2	..	..	210
Elect. Eng. Lab	112	..	..	1	1	210
Machine Design	225	2	2	..	..	218
Mechanical Drawing	231	..	..	2	1	219
Mechanical Eng. and Lab	227, 228	3	3	1	1	218
Mechanics	86	2	..	..	..	205
Mechanics of Machines	224	2	2	½	½	217
Shopwork	235, 236	..	..	1	1	219
Shop Processes and Management	237	1	1	..	..	220
Strength of Mats. and Lab	87, 88	2	2	..	1	205
Structural Design	90	..	1	..	1	205
Thermodynamics	229	2	2	..	..	219
Sum. Sch. Shopwork	233, 234	..	..	..	..	219
Sum. Reading or Essay	133	..	..	..	..	191

FOURTH YEAR.

Designing	241	..	..	1	1	220
**Economics	171	2	..	..	..	214
†Engineering Law (alt.)	175	1	1	..	..	215
Experimental Eng	257	1	1	..	..	221
Hydraulics and Lab	97, 98	2	..	1	..	206
**Hydraulic Mach. (alt.)	99	..	2	..	..	207
**Man. Plant Des. (alt.)	253	..	2	..	1	222
Machine Design	242	2	2	..	..	220
Power Plant Design	244	1	1	1	1	221
Heat. and Vent. of Buildings	247	1	1	..	..	221
Mech. Eng. Lab	249	..	..	3⅓	3⅓	221
Mech. of Mach	240	2	2	⅓	⅓	220
†Military Science (alt.)	400	2	2	..	1	274
Works Organization and Accounting	254	1	1	..	..	222
Shopwork	252	..	..	1	1	221
Thermodynamics	251	2	2	..	..	221
Summer Essay	134	..	..	..	..	192

**One of the subjects, 253 *or* 99, must be taken unless Military Science (400) is chosen.

†Military Science (400) is alternative with Engineering Law (175) and Hydraulic Machinery (99) *or* Man. Plant Design (253).

**The introduction of this course will necessitate a reduction in the time assigned to one or more of the other subjects of the year. Particulars of these changes will be announced later.

VII. METALLURGICAL ENGINEERING.

This course is designed for students intending to enter metallurgical works, such as iron or steel works or smelters. It includes instruction in the engineering, chemical, metallurgical and ore-dressing studies required by practising metallurgists.

A certain amount of mining is included in the third year curriculum in order to show the relation between mining and metallurgy; but the course is not intended for students wishing to become mining engineers.

Students who wish to specialize on the chemical side of metallurgy are recommended to select Course VIII.

In the third year of the Metallurgical Engineering Course instruction is given in chemistry, assaying, geology, mineralogy, metallurgy, mining, ore-dressing, and mechanical, structural and business engineering.

After the third year there is a summer school in metallurgical works.

In the fourth year instruction is given in chemistry, electrical engineering, law, hydraulics, metallurgy and ore-dressing. Metallurgical designing and laboratory work form important parts of the course.

FIRST AND SECOND YEARS.

As in other Engineering Courses. For details, see pages 170 and 171.

Before the third year there is a four weeks' summer school in qualitative analysis in the chemical laboratory, beginning about the first of September.

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Economics	171	..	2	..	..	214
Fire Assaying	263	1	..	2	..	223
Geology, General	141	2	2	½	½	212
Gen. Element. Metall	261	2	..	..	½	222
Inorg. Quant. Anal. and Lab	61, 62	1	..	1	1	201
Mech. Eng. and Lab	226, 228	2	2	1	1	218
Metall. Calculations	265	1	1	..	..	223
Metall. Colloquium	266	1	1	..	..	223
Metallurgical Lab	262	..	..	..	1½	222
Mineralogy and Lab	142, 143	2	2	2	..	213
Mining Engineering	291	..	2	..	..	225
Ore Dressing and Lab	292	2	2	..	½	225
Strength of Mats. and Lab	87, 88	2	2	..	1	205
Structural Design	90	..	1	..	1	205
Summer School Inorg. Qual. Anal. and Lab	54, 55	..	..	..	..	200
Sum. Reading or Essay	133	..	..	..	..	191

FOURTH YEAR.

Elem. Elect. Eng and Lab	111, 112	2	2	1	1	210
Electro-Metal. and Lab	275, 276	..	2	..	1	224
**Economics	171	2	..	..	..	214
†Engineering Law (alt.)	175	1	1	..	..	215
General Metallurgy	271	2	2	..	..	224
Hydraulics	101	1	..	½	..	207
Industrial Chemistry, Inorg.	68	2	..	..	..	203
Inorganic Quant. Anal	67	..	1	4	..	202
†Metallurgy	272	3	3	..	..	224
Metallurgy Colloquium	277	1	1	..	..	224
†Metall. Lab	274	..	..	½	3	224
Metall. Mach. and Design	278	..	..	..	2	225
†Military Science (alt.)	400	2	2	..	1	274
Ore Dressing and Lab	299, 300	2	..	1	..	226
Ore Deposits	148	..	4	..	..	213
*Sum. Sch. Metal. Works	267	..	..	..	..	223
Summer Essay	134	..	..	..	..	192

†Military Science (400) is alternative with Engineering Law (175) and one hour per week in Metallurgy (272) and one-half period first term Metal Lab. (274).

*Metallurgical summer school (267) is taken at the end of the third year. For summer schools see page 190.

**The introduction of this course will necessitate a reduction in the time assigned to one or more of the other subjects of the year. Particulars of these changes will be announced later.

VIII. METALLURGY.

This course is designed for students who intend to devote their attention mainly to the chemical side of metallurgy with the object of becoming analytical or consulting metallurgical chemists. The first two years are the same as in the Chemistry Course. In the third and fourth years instruction is given in analytical chemistry and assaying, theoretical inorganic and electro-chemistry, metallurgy, mineralogy, geology, ore-dressing and mechanical engineering. After the third year there is a summer school in metallurgical works. Certain alternative subjects are offered in the fourth year.

FIRST YEAR.

As in other courses. For details, see page 170.

SECOND YEAR.

As in Course II, Chemistry. For details, see page 174.

Before the third year a summer school is given in metallography. This will be held in September. For details, see subject 264.

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see
		First Term	Second Term	First Term	Second Term	
Economics	171	..	2	..	..	214
Fire Assaying	263	1	..	2	..	223
Geology, General	141	2	2	½	½	212
Gen. Element. Metal	261	2	..	..	½	222
Inorg. Quant. Anal. and Lab.	61, 62	1	..	2	3	201
Mechan. Eng. and Lab	226, 228	2	2	1	1	218
Metall. Calculations	265	1	1	..	..	223
Metall. Colloq. and Library	266	1	1	..	..	223
Metallurgical Lab	262	..	..	..	2	222
Mineralogy and Lab	142, 143	2	2	2	..	213
Ore Dressing and Lab	292	2	2	..	½	225
Physical Chemistry	58	..	2	..	..	201
Sum. Sch. Metallography	264	..	..	..	..	223
Sum. Reading or Essay	133	..	..	..	..	191

FOURTH YEAR.

Electro-Chemistry	70	2	..	..	..	203
Electro-Metall. and Lab	275, 276	..	2	..	1	224
**Economics	171	2	..	..	..	214
†Engineering Law (alt.)	175	1	1	..	..	215
General Metallurgy	271	2	2	..	..	224
Industrial Chemistry, Inorg.	68	2	..	..	..	203
†Inorg. Chemistry (alt.)	72	2	2	..	..	203
Inorg. Quant. Anal	67	..	1	3	2	202
Metallurgy	272	3	3	..	..	224
Metallurgy Colloquium	277	1	1	..	..	224
Metall. Lab	274	..	..	3	2	224
Metall. Mach. and Design	278	..	..	..	2	225
†Military Science (alt.)	400	2	2	..	1	274
Ore Dressing and Lab	299, 300	2	..	1	..	226
†Ore Deposits and Economic Geology (alt.)	148	1	4	..	..	213
†Petrog. and Lab. (alt.)	146	1	..	..	1	213
*Sum. Sch. Metal. Works	267	..	..	..	..	223
Summer Essay	134	..	..	..	..	192

†Students taking Military Science (400) need not take any of the other alternative subjects 72, 146, 148 and 175.

Other students will take Engineering Law (175) and one of the subjects 72, 146 and 148, but the lectures given will be so arranged as to give these courses equal weight.

*Metallurgical summer school (267) is taken at the end of the third year.

**The introduction of this course will necessitate a reduction in the time assigned to one or more of the other subjects of the year. Particulars of these changes will be announced later.

IX. MINING ENGINEERING.

Specialization does not begin until the third year, when an elementary course in metallurgy is given and the professional courses in mining, ore-dressing and fire-assaying are begun, but the chief work is still in such fundamental science subjects as applied mechanics, chemistry, geology, mineralogy, and mechanical engineering.

The fourth year, on the other hand, is very largely given up to technical work in mining, ore-dressing, economic geology, metallurgy, and electrical engineering, and two elective alternative lines of study are offered, both including the essential subjects of the Mining Course and leading to the degree, but each permitting of a considerable amount of specialization, the first (*a*) in advanced petrography and geology, the second (*b*) in mining and ore-dressing machinery.

In both cases the fourth year work includes the equivalent of at least two full days per week in the laboratories and drafting room of the mining department, and in the second term each student is required to prepare a thesis giving the result of an extended individual experimental investigation.

A field school in mining, ore-dressing and geology is held between the third and fourth years, the work ordinarily beginning immediately after the close of the April examinations. From four to six weeks are spent in travel, during which a number of mines and concentrators are visited and critically studied under the direction of the departmental staff.

Facilities are also afforded in the department to graduate students who wish to do advanced work in mining or ore-dressing.

FIRST AND SECOND YEARS.

As in other Engineering Courses. For details, see pages 170 and 171.

THIRD YEAR.

SUBJECT	Subject Number	Lectures per week		Laboratory, etc., periods per week		For details see page
		First Term	Second Term	First Term	Second Term	
Economics	171	..	2	..	..	214
Fire Assaying	263	1	..	½	..	223
Geology, General	141	2	2	½	½	212
Inorg. Qual. Anal. and Lab.	59, 60	1	..	..	2	201
Mine Mapping	293	..	..	1	..	225
Mech. Eng. and Lab.	226, 228	2	2	1	1	218
Gen. Element. Metall.	261	2	..	..	½	222
Mineralogy	142	2	2	..	..	213
Mineralogy, Determinative	143	..	..	2	..	213
Mining Engineering	291	..	2	..	..	225
Ore Dressing and Lab.	292	2	2	..	½	225
Strength of Mats. and Lab.	87, 88	2	2	..	1	205
Struct. Design	90	..	1	..	1	205
Surveying	352	2	..	..	..	231
Surveying Field Work	354	..	..	..	..	231
Sum. Reading or Essay	133	..	..	..	..	191

FOURTH YEAR.

**Economics	171	2	..	..	..	214
Elem. of Elec. Eng. and Lab.	111, 112	2	2	1	1§	210
Engineering Law (alt.)	175	1†	1†	..	..	215
Geology of Canada	149	1	..	..	..	214
Geology, Historical (alt.)	152	1*	1*	..	1*	214
Hydraulics	101	1	..	½	..	207
Metallurgy, General	271	2	2	..	..	224
Military Science (alt.)	400	2†	2†	..	1†	274
Mineral Analysis	71	..	..	4	..	203
Mining Engineering	297	3	3	..	..	225
Mining Mach.	298	1*† / 2§†	1* / 2§	..	2	226
Mining Colloquium	302	..	1	..	..	226
Ore Dep. and Econ. Geol.	148	1	4†	..	..	213
Ore Dressing and Milling	299	2	..	..	..	226
Ore Dress. Lab.	300	..	..	½* / 1½§	..	226
Ore Dress. Lab. and Thesis	301	..	..	..	3	226
Petrography and Lab.	146	1	..	..	1	213
Petrography Advanced (alt.)	147	..	..	1*	..	213
Mining Field School	294	..	..	..	..	228
Field Geology (alt.)	154	..	..	..	..	214
Summer Essay	134	..	..	..	..	192

†Students taking Military Science omit the whole of Engineering Law (175) and 12 lectures each in Mining Machinery (298) and Ore Deposits (148).

*For students taking the Mining Geology Alternative Course.

§For students taking the Mining Engineering Alternative Course.

NOTE:—Mining Field work at end of third year. See page 228.

Surveying Field Work, beginning Sept. 2nd, 1919. See pages 190 and 231.

**The introduction of this course will necessitate a reduction in the time assigned to one or more of the other subjects of the year. Particulars of these changes will be announced later.

SUMMER SCHOOLS.

Undergraduates are required to attend Summer Sessions as specified below. The work is set forth in detail under the subject numbers referred to.

Except as noted Classes will begin on September 2nd, and will close on September 27th, 1919.

COURSE	Students entering Second Year		Students entering Third Year		Students entering Fourth Year	
	Subject No.	Page	Subject No.	Page	Subject No.	Page
Architecture	347	230	..	..	..	..
Chemistry	..	230	263, 264	223	..	..
Chemical Engineering	347	230	54, 55	200	..	..
Civil Engineering	347	230	354	230	361	231
Elect. Engineering	347	230	..	..	..	..
			..	..	..	..
Mechanical Engineering	347	230	233	219	..	..
			234	219	..	..
Metallurgical Eng.	347	230	54, 55	200	*267	223
Metallurgy	..	230	264	230	*267	223
Mining Engineering (alt.)a	347	230	354	223	†154	214
					*294	228
Mining Engineering (alt.) b	347	230	354	230	*294	228

*These schools are held during the month of May.

†This school is held in the ten days just preceding the beginning of the first term.

SUMMER ESSAYS AND SUMMER READING.

Session 1919-20.

1. For Students entering the Second Year.

All students entering the second year, except those in the course in Architecture (see below), will be required to read the following books:—

Darwin—"The Voyage of the Beagle."
(No. 104, Everyman's Library,
J. M. Dent & Sons, Limited).
Macaulay—Essays on Hampden, Walpole, Pitt, Chatham, Clive and Hastings. (No. 225, Everyman's Library, J. M. Dent & Sons, Limited).
Withers—"Poverty and Waste."
E. P. Dutton & Company.
Ferrand—"The Development of the United States."
Houghton Mifflin Company.
Parkman—"Montcalm and Wolfe."
Little Brown Company.

Students in the course in Architecture must read the following books:—

Sturgis, Russel—"How to Judge Architecture."
Lytton, Lord—"Last Days of Pompeii."

Students in the course in Architecture must also either spend five weeks in the office of an architect or contractor, or prepare thirty-five reasonably large freehand sketches in any desired medium.

All students will be required to pass an examination in the summer reading at the opening of the session. A maximum of 100 marks will be allowed for this reading.

2. For Students entering the Third Year.

Students entering the third year, except those in the course in Architecture (see below), must either

(a) Follow a course of summer reading, *or*
(b) Prepare an essay.

(a) The summer reading required is Shadwell's Industrial Efficiency (Longmans, Green & Co., 1913), on which an examination will be held at the opening of the session. The same number of marks are allotted for this reading as for the essay.

(b) The essay must in all respects follow the specifications laid down for essays submitted by students entering the fourth year, except that it may be shorter. All rules and regulations governing the fourth year essays, as set forth below, also apply to the third year essays. (See section 3.)

Students in Electrical Engineering or Mechanical Engineering electing to write an essay and who are not engaged during the summer on any engineering, scientific or industrial work which would afford a subject for an essay, may write on one of the following subjects:—

Electrical Engineering students.

(1) The Application of Electric Power to Industrial Establishments.

(2) Relation between Fundamental, Electrical and Mechanical Units.

Mechanical Engineering students.

(1) Pulverized Fuel under Boilers.
(2) Industrial Safety.
(3) Shop Gages.

Students in Mining Engineering who are for any reason unable to write on some engineering work of which they have personal knowledge will be required to take the summer reading (a).

Students in the course in Architecture are not permitted to submit an essay, but must read the following books:—

Benvenuto Cellini's Autobiography.
(Everyman's Library, Dent.)
Hirn Yrjö—"The Origins of Art."
London, 1900. Macmillan Company.

Students in the course in Architecture must either spend five weeks in the office of an architect or contractor, or prepare thirty-five reasonably large freehand sketches in any desired medium.

3. For Students entering the Fourth and Fifth Years.

Students entering the fourth year, except those in the course in Architecture (see below), are required to prepare an essay during the summer,

to be handed in at the Dean's Office *not later than 5 p.m. on Friday, October 10th.* A maximum of 100 marks, or nearly 10% of the total marks for the year, is assigned to this essay.

The essays should be from 2,000 to 5,000 words in length. They should be illustrated by drawings, sketches, and (when desirable) by photographs, specimens, etc.

No essay compiled from books alone will be accepted unless the student has obtained in advance the permission of the head of his department to prepare such an essay.

The *most acceptable subject for an essay* is a critical description of the work on which the student is engaged during the summer, but a description of any engineering, scientific, or industrial work with which he is familiar will be accepted.

Students in Electrical Engineering, or Mechanical Engineering, who are not directly connected with any suitable work, may write on one of the following subjects:—

Electrical Engineering students.

(1) Long Distance Power Transmission.
(2) Variable Speed Drives for Machine Tools.
(3) The Substitution of Electricity for Steam on Railroads.

Mechanical Engineering students.

(1) Heavy-oil Engines.
(2) Central Station Heating.
(3) Engineering Ethics.

The essays must be well expressed, and written in precise, well chosen grammatical English. Advantage may be taken of any source of information in the preparation of the essays, but due acknowledgment must always be made of all the authorities and books which have been consulted. In judging of the value of the essays, account will be taken not only of the subject matter, but also of style and literary construction.

All essays when handed in will become the property of the department concerned and will be filed for reference. Students may submit duplicate copies of their essays in competition for the students' prizes of the Engineering Institute of Canada, or of the Canadian Mining Institute.

The essays must be written on paper of substantial quality and of a size approximately 8½ x 11 inches.

Students in the course in Architecture are not permitted to submit an essay, but must read the following books:—

Fourth Year.

Benvenuto Cellini's Autobiography.
(Everyman's Library, Dent.)
Hirn Yrjö—"The Origins of Art."
London, 1900. Macmillan Company.

Fifth Year

Morris, W. Lectures on Art.
Santayana, G. The Sense of Beauty.
N.Y. 1896.

They will be required to pass an examination on this reading at the opening of the session. A maximum of 100 marks will be allowed for the work.

In addition to this reading, students in the course in Architecture must either spend five weeks in the office of an architect or contractor, or prepare thirty-five reasonably large freehand sketches in any desired medium.

SUBJECTS OF INSTRUCTION.

The following courses are subject to such modifications during the year as the Faculty may deem advisable.

DEPARTMENT OF ARCHITECTURE.

PROFESSORS:—{RAMSAY TRAQUAIR (in charge of Department).
PERCY E. NOBBS (in charge of Design).

GENERAL ASSISTANT:—D. STUART FORBES.

LECTURER:—H. M. LAMB.

INSTRUCTOR:—H. HÉBERT.

ASSISTANT IN DESIGN:—E. CORMIER.

A.—Design.

Students register for second, third, fourth or fifth year Design according to their year in the University. They are graded for purposes of instruction into grades A, B, C and D, and are promoted in these grades according to ability. All students before receiving the degree must pass fifth year Design and qualify in grade D.

1. GRADE A. Simple problems in composition of a monumental nature, not involving difficulties of plan.

2. GRADE B. The Design of domestic and small public buildings involving simple plans and the grouping of elements.

3. GRADE C. The design of public buildings.

4. GRADE D. A series of problems involving the plan, structure and lay-out of complex buildings and groups of buildings. The diploma design for graduation is done in the second term of the final year.—Mr. Nobbs.

B.—Aesthetic.

The theoretical courses that follow are intended to develop a sense of critical judgment in the student, and to emphasize the fundamental principles of composition and design.

5. THE ELEMENTS OF ARCHITECTURE (24 lectures).
The five orders of Vignola, pedestals, pediments, intercolumination and superposition of orders, arches, vaults, domes, roofs, openings, walls, and stairs. Mr. Forbes.

6. THE ELEMENTS OF COMPOSITION (24 lectures).
Analogies in the arts, proportion, scale, expression, decoration, massing, unity, symmetric and asymmetric grouping, individuality, horizon-

tality and verticality. General rules of composition in plan; architectural acoustics and the æsthetic properties of materials. Mr. Forbes.

Reference Book:—Eléments et théorie de l'Architecture. Gaudet.

7. THEORY OF DESIGN (24 lectures).

(a) *Aesthetic Practice:*—Pure design; the function of ornament; the moral logic of ornamental motif; the material logic of ornamental treatment; evolution of form; the placing of ornament; classification of significant ornament; (b) *Aesthetic Theory:*—The history of æsthetic enquiry; the phenomena of perception, pleasure, pain, and expression; the art impulse, and the relation of beauty to the arts; subject, emotional content and medium in works of art; the criteria of excellence. Prof. Nobbs.

Books:—The Mistress Art, Bloomfield; The Fine Arts, Baldwin Brown.

8. THEORY OF PLANNING (24 lectures).

(a) *Elements of Planning:*—The relation of planning to external compositions; dimensions and arrangements, scale, aspect and prospect; (*b*) *Domestic Buildings:*—Residential architecture of all types, stables, garages, etc.; (*c*) *Ecclesiastical Art:*—Church plans in relation to the service (*d*) *Special Types:*—Fire stations, baths, hospitals, schools, factories, libraries, etc.; (*e*) *Public Buildings:*—Town halls, municipal buildings, court houses, Parliament buildings, large halls. Prof. Nobbs.

Text-books:—The Principles of Planning Buildings, Marks.

ORNAMENT AND DECORATION (48 lectures and 48 drafting periods), 9, 10, 11 and 12.

9. DECORATIVE HERALDRY. The place of heraldry in the arts; the laws of heraldry, heraldic art of different periods; modern practice and tendencies. Prof. Traquair.

Text-book:—Decorative Heraldry, Eve. *Reference:*—The Art of Heraldry, Fox-Davies.

10. ORNAMENT IN FORM. Plaster work, terra cotta, stone carving, architectural sculpture, wood carving and furniture design are dealt with from the point of view of the evolution of form in distinctive materials influenced incidentally by the prevailing tastes of different periods. Prof. Traquair.

Reference Books:—Plastering, Plain and Decorative, Millar; The Art of the Plasterer, Bankart; Mediæval Figure Sculpture in England, Prior.

11. METAL WORK. Wrought iron, cast iron and bronze, beaten work in copper, brass and silver are dealt with technically and historically. Prof. Traquair.

Reference Books:—English and Scottish Wrought Iron Work, Murphy; Ironwork, Starkie Gardner; Leadwork, Lethaby.

12. COLOUR DECORATION. Stained glass, mosaic of various kinds, inlays, the use of coloured materials in external and internal design, mural decoration, and the analysis and construction of pattern. Prof. Traquair.

Reference Books:—Vitraux, Merson; Windows, Day.

C.—Archæology.

13. GENERAL HISTORY. Mediæval and Modern Europe (50 lectures). For particulars of the course, which constitutes the second year history course in the Faculty of Arts, see page 126. Prof. Fryer.

14. ANCIENT AND CLASSIC ARCHITECTURE (48 lectures).

The architecture of the ancient Egyptians, Chaldæans, Assyrians and Persians; the Minoan civilization; architecture of the Dorian and Ionian Greeks, with special attention to the refinement of form in Hellenic art; the architecture of Rome and Byzantium to the fall of the Byzantine Empire. Prof. Traquair.

Text Books:—Banister Fletcher's History of Architecture. Anderson and Spier's Architecture of Greece and Rome.

15. MEDIAEVAL ARCHITECTURE (48 lectures).

The rise of the Romanesque schools, from the decline of the Western Roman Empire to the XI century; the evolution of ecclesiastical architecture in France and England to 1500 A.D.; the Gothic schools of Europe and the evolution of military and civil architecture. Prof. Traquair.

Text-book:—Power's Mediæval Architecture.

16. RENAISSANCE ARCHITECTURE (48 lectures).

The beginning of the Renaissance in Italy and its influence on architecture from 1400 A.D. to 1600 A.D.; the Renaissance in France from Francis I to the Revolution; the earlier and later phases of the Renaissance in England and English architecture during the XVIII century. Prof. Traquair.

Text-books:—Anderson's Italian Renaissance Architecture. W. H. Ward's French Renaissance Architecture. R. Bloomfield's Short History of Renaissance Architecture in England.

17. MODERN ARCHITECTURE (48 lectures).

The Gothic revival in England; the influence of Pugin, Ruskin and Morris and the Preraphaelites; the Arts and Crafts movement; the eclectic schools; Shaw and the Free-Classicists; taste in Europe during the XIX century; the classic schools and the official school; the national revivals in Russia and Germany; the Secession and the "Art Nouveau"; the colonial traditions of New England and the Spanish and French districts; the Beaux Arts influence; the English influences; the Modern School; city planning in Europe and America. Prof. Traquair.

D.—Science.

MATHEMATICS 191, 192, 193, 194, Algebra, Geometry, Trigonometry and Mechanics. For full particulars, see page 215.

42 and 43. PHYSICS AND PHYSICS LABORATORY (48 lectures and 24 periods).

The instruction includes a fully illustrated course of experimental lectures on the general principles of physics, embracing the laws of energy, heat, light, electricity and sound. Prof. Eve.

346, 347 and 348. SURVEYING. (Full course: 4 weeks field school, 48 lectures and 24 draughting periods, see page 230.)

22 and 23. HYGIENE OF BUILDINGS. (24 lectures in first term, 12 lectures and working out of one graphical problem in second term.)

22. Light and air, water, sanitary plumbing, sewage disposal. First term. Dr. Starkey.

23. The heating and ventilation of buildings. Second term. Prof. McKergow.

E.—Construction.

The second year work covers the ordinary building trades and detailing where calculations of a complicated kind are not involved. The third year work deals with structural problems involving calculation, while in the fourth year problems in structural design are worked out.

24 and 25. BUILDING CONSTRUCTION AND BUILDING DETAIL (24 lectures, 48 draughting periods).

Building materials, brickwork, masonry, carpentry, roofing, etc.; joinery of doors, windows, etc., and the finishing trades, such as plastering, painting and plumbing; underpinning, shoring, centering and forms. General working drawings are prepared, and building works in progress are visited. Mr. Turner.

26 and 27. STRUCTURAL ENGINEERING I AND STRUCTURAL ENGINEERING (Draughting) I) 48 lectures and 24 draughting periods).

Steel Construction:—Ores and manufacture of iron and steel; theory of beams, cases of loading; designing, detailing and shop work of beams. *Columns:*—theory, calculations, eccentric loads; single-sections and built-up steel columns; cast iron columns, beam box girders, plate girders, calculation; steel frame work for buildings; specifications for and imspection of structural steel work; wind bracing and fire-proofing. *Foundations:*—Soils, beds, timber and concrete piles, pile driving and pile driving machinery; foundations on compressive soils; concrete footings, timber spread footings, steel spread footings; masonry footings; loads on buildings; strength of masonry, stability of buildings. Mr. Lamb.

28 and 29. STRUCTURAL ENGINEERING II AND STRUCTURAL ENGINEERING (Draughting) II (24 lectures and 48 draughting periods).

Structural Engineering II.—Analysis of stresses in trusses, graphical statics; design of roof trusses and mill-building; theory and practice of reinforced concrete building construction, including floor-slabs, beams, girders and columns; foundations and retaining walls; theory of masonry arches. Mr. Lamb.

F.—Architectural Practice.

131. ENGLISH COMPOSITION (24 lectures with exercises).

Instruction is provided with the Applied Science first year classes. (See page 212). Mr. Latham.

30. PROFESSIONAL PRACTICE (24 lectures with exercises).

Structure of specifications and general clauses; specifications for all trades; conditions of contract; agreements; building by-laws; estimates, reports, professional ethics. Mr. Turner.

175 ENGINEERING LAW (24 lectures).

Instruction is provided with the Applied Science fourth year classes (see page 214).

G.—Drawing.

31, 32, 33, and 34. ARCHITECTURAL DRAWING (84 periods of three and four hours).

The work in this course is in direct connection with the lectures in archæology.

31. Drawings of the Classic orders are prepared direct from the large models in the museum, and arch, vault, dome and roof diagrams are also prepared from documents. Mr. Forbes.

32. Drawings of the Greek orders are prepared with special reference to their structural development and design. Restorations of classic buildings are prepared from the documents in the reference room.

33. Examples of mediæval architecture are studied; sketch plans and elevations of important works are set up, and detail drawings are prepared from documents.

34. A special study is made during the first term of Italian Renaissance examples; the XVI century architecture of France and England and late examples of French or English fully developed Classic are studied. Prof. Traquair and Mr. Forbes.

35. HISTORICAL DRAWING. The advanced study of one or more buildings of an historical style by means of large scale drawings.

36, 37, 38, 39. FREEHAND DRAWING (48 periods).

Drawing in pencil or charcoal from casts of architectural ornament, architectural fragments and parts of the figure. Mr. Hébert.

18. ARCHITECTURAL GEOMETRY (24 lectures and 24 periods).

Geometrical drawing and descriptive geometry, shades and shadows in their application to architectural forms and the inter-sections of geometrical solids. Mr. Forbes.

19. PERSPECTIVE (24 periods with occasional explanatory lectures).

The elements of rectilinear perspective and the practical application of the precepts in making perspective drawings of the design problems in hand. Mr. Forbes.

40 and 41. MODELLING (one period a week of two hours, extended over the fourth and fifth years).

The student first studies form directly from nature, and later on conventionalizes the forms with which he has become familiar for decorative purposes. The Architestural museum affords many examples from different periods of the adaptation and abstraction of natural motifs in ornament. They are used to show the spirit in which to work out ornament, and are not copied directly. Models of design on which the students are engaged are also prepared, and casting is taught. Mr. Hébert.

44, 45, 46, 47. An essay on an historical or theoretical subject is required from all students excepting those of the first year. This essay is to be prepared during the session.

48. SUMMER WORK.

During the vacation following the close of the first, second and third years, the students in Architecture are required to read and be prepared to pass an examination on a selected theoretical, æsthetical, or historical architectural work, and in addition to this, to spend at least five weeks in the office of some architect or contractor; the period of such employment to be certified by a letter from the employer. For the students who for any reason find it impracticable to do office work, the substitution of thirty-five reasonably large freehand sketches, rendered in any desired medium, will be considered an equivalent.

For summer reading, see page 191.

DEPARTMENT OF CHEMISTRY.

PROFESSOR:—R. F. RUTTAN.

ASSOCIATE PROFESSORS:—NEVIL NORTON EVANS. V. J. HARDING.

ASSISTANT PROFESSORS:—V. K. KRIEBLE. F. W. SKIRROW.

LECTURERS:—A. R. M. MCLEAN. OTTO MAASS.

DEMONSTRATORS:—G. S. WHITBY. E. G. YOUNG. O. W. HERZBERG. JOHN RUSSELL C. GREAVES. W. MCG. MITCHELL.

Second Year Lectures.

51. (See also 75.) GENERAL CHEMISTRY. The course includes the history, properties, methods of preparation of the most important elements and compounds, with their industrial applications; classification; general laws and principles; and the fundamental theories of the science. Three hours a week for all students in Engineering. Professor Evans.

Text-book:—Macpherson and Henderson, General Chemistry.

54. INORGANIC QUALITATIVE ANALYSIS. A course dealing with the principles of analytical chemistry—nature of solutions, precipitation, etc., explanatory of the work done in the laboratory (course 55). One lecture a week in the second term, or five lectures a week for the first three weeks of the summer session. Professor Evans and Mr. Herzberg.

Text-book:—W. A. Noyes' Qualitative Analysis. *Reference:*—Stieglitz, Qualitative Chemical Analysis.

Second Year Laboratory.

52. GENERAL CHEMISTRY LABORATORY. Practical work designed to accompany and illustrate the lectures of course 51. The course includes the construction and use of ordinary apparatus, the preparation and study of important elements and compounds, qualitative analysis, and simple quantitative determinations, both gravimetric and volumetric, including combining weights, standardisation of solutions, hardness of water, etc. one period for all students of Engineering. Professor Evans, Mr. Wieland and Mr. Greaves.

53. GENERAL CHEMISTRY LABORATORY. A course similar to number 52, but more extensive, and including the preparation and purification of inorganic chemicals. Four periods a week in the first term for students of the Chemistry and Metallurgy Courses. Professor Evans and Mr. Wieland.

55. INORGANIC QUALITATIVE ANALYSIS LABORATORY. An extended course. Four periods a week in the second term, for students of the Chemistry and Metallurgy Courses; or equivalent time in the Summer School for students of the Chemical and Metallurgical Engineering Courses. Professor Evans and Mr. Russell.

Text-books:—W. A. Noyes' Qualitative Analysis.

Third Year Lectures.

56. ORGANIC CHEMISTRY. A course in general elementary organic chemistry. Three lectures a week during the first term and two during the second term. Drs. Ruttan and Krieble.

Text-books:—Perkin and Kipping's *or* Remsen's Organic Chemistry.

58. PHYSICAL CHEMISTRY. An introductory course following the development of chemical theory, including vapour densities, molecular weights, the mass law and the phase rule.

Two lectures a week during the first term. Mr. Maass.

Text-book:—Theoretical and Physical Chemistry, Bigelow.

59. INORGANIC QUALITATIVE ANALYSIS. A course explanatory of the work done in the laboratory. One lecture a week in the second term for Mining Engineers only. Professor Evans.

Text-book:—W. A. Noyes' Qualitative Chemical Analysis.

61. INORGANIC QUANTITATIVE ANALYSIS. A course on the general principles involved in quantitative analysis. One lecture a week during the first term of the third year. Dr. Skirrow.

Text-book:—Cumming and Kay. *For Reference:*—Treadwell's Quantitative Analysis.

Third Year Laboratory.

57. ORGANIC CHEMISTRY. A course on the preparation, detection and analysis of the commoner organic compounds. Two periods a week in the second term. Dr. McLean and Mr. Whitby.

Text-book:—Gattermann's Organic Preparations.

60. Inorganic Qualitative Analysis. A course adapted to the requirements of Mining Engineers. Two periods a week in the second term. Professor Evans and Mr. Russell.

62. (See also 76.) Inorganic Quantitative Analysis. An extensive course on gravimetric and volumetric method. Three periods per week for Chemical Engineers (Course III.) Dr. Skirrow and Mr. Greaves

Text-book:—Cunningham and Kay, Quantitative Analysis.

Fourth Year Lectures and Laboratory.

73. Organic and Food Chemistry. A course on the constitution and analysis of proteins, carbohydrates, fats and allied substances. The course also includes the estimation of food values, enzyme action and colloidal chemistry. A course of one lecture per week and three laboratory periods during the second term. Dr. Ruttan and Dr. Krieble.

Text-book:—Leach, Food Inspection and Analysis.

64. Advanced Organic Chemistry. During the autumn term the course comprises the development of general theoretical organic chemistry, and a series of special lectures on the carbohydrates and the terpenes.

The winter term is devoted to the organic chemistry of nitrogen, including the proteins, purins, alkaloids, etc. Drs. Ruttan and Harding.

Text-book:—Perkin and Kipping's Organic Chemistry. *For reference:*—Recent Advances in Organic Chemistry, Stewart; Advanced Organic Chemistry, Cohen; Organic Chemistry of Nitrogen, Sidgewick.

65. Advanced Organic Laboratory. This course includes the application of the important general organic reactions, quantitative organic determinations, a study of the improvement in conditions of reaction and the preparation of some typical organic dyes and synthetic drugs. Drs. Krieble and MacLean.

The student is required during this course to take a complete course in gas analysis under Dr. Skirrow.

66. Physical Chemistry. Two lectures a week on general physical chemistry, including the kinetic theory, thermo-chemistry, electron theory in chemistry, chemistry of radioactive substances, etc.

Students will be required to work problems dealing with the subject matter of the lectures.

Two laboratory periods a week in the first term are devoted to typical physico-chemical measurements. One laboratory period a week during the second term is devoted to physical chemical methods of analysis. Mr. Maass.

Text-books:—Nernsts' Theoretical Chemistry; Findlay's Physico Chemical Measurements.

For Reference:—Ramsay's Text-books of Physical Chemistry.

67. (See also 77.) Inorganic Laboratory. The lectures deal with the special methods of analysis of iron and steel, alloys, gas and water.

One lecture and four periods a week in the first term and five periods in the second. For Chemical Engineering students. Dr. Skirrow and Mr. Greaves.

The laboratory work is a continuation of courses 61 and 62 and is adapted both in extent and in subject matter to the needs of individual students, various other courses being allowed as partial alternatives.

For reference:—Lord and Demorest; Treadwell's Quantitative Analysis; Blair, Chemical Analysis of Iron; Brearley and Ibbotson, Analysis of Steel Works Materials.

68. Industrial Chemistry, Inorganic. A course, both theoretical and descriptive, on the more important inorganic chemical industries. Special lectures are given by chemical engineers from outside the University during the first term, and visits to works are made during the session. Professor Evans.

69. Industrial Chemistry, Organic. This course is given during the second half of the session, and includes the chemistry of paper and pulp, sugar, starch and glucose, soap and fats, distillation of wood and the purification of the products, etc. This course is given by Dr. Ruttan, with special lectures by several chemical engineers from the city and district who are specialists in one or other of the industries.

70. Applied Electro-Chemistry. The laws of electrolysis and of solutions are studied from the standpoint of the osmotic theory. Primary and secondary batteries, electro-plating, polarisation and the preparation and electro-chemical behaviour of the rarer elements used in incandescent lamps are discussed. The more important technical processes are studied and typical substances prepared in the laboratory. Two lectures in the first term. Dr. Johnson and Mr. Maass.

For reference:—Le Blanc, Elements of Electro-chemistry; Blount, Practical Electro-chemistry.

71. Mineral Analysis. A laboratory course specially designed for Mining Engineers. Four periods a week in the first term. Dr. Skirrow and Mr. Greaves.

Text-book:—Lord and Demorest. *For reference*:—Olsen's Quantitative Analysis.

72. Advanced Inorgantic Chemistry. A course of lectures on inorganic chemistry, discussing the elements and their compounds in accordance with the general principles of physical chemistry.

Two lectures a week throughout the session. Dr. Skirrow.

74. History of Chemistry. A short course dealing with the development of chemistry from the historical standpoint. One lecture ere week in the second term. Mr. Maass.

75. General Chemistry. This course is the same as that for students in Chemical Engineering (51), with one additional lecture or seminar per week. Prof. Evans.

76. Inorganic Quantitative Analysis. This course is similar to course 62, but is more extended. Six periods per week for chemists. Dr. Skirrow.

77. Inorganic Laboratory. This course is similar to course 67, but is extended to include special preparations. One lecture and six periods in the first term and seven periods in the second for chemists. Dr. Skirrow.

DEPARTMENT OF CIVIL ENGINEERING AND APPLIED MECHANICS.

Professors:—H. M. Mackay. E. Brown

Assistant Professors:—C. Batho. H. M. Lamb.

Lecturer:—R. de L. French.

Assistant in Charge of Testing Laboratory:—S. D. Macnab.

Demonstrators:—R. S. L. Wilson. G. J. Dodd ———— ————

Second Year.

81. Materials of Construction. Manufacture and properties of cast iron, wrought iron, crucible, bessemer and open hearth steel; principal alloys; considerations governing selections of materials; manufacture and properties of Portland and natural cements; limes; concrete; stone and brick masonry; principal kinds of timber used for engineering purposes; preservation of timber; discussion of standard specifications.

Required of all engineering students. One hour per week. Prof. MacKay.

82. Graphical Statics. Composition of forces; general methods involving the use of funicular and force polygons; determination of reactions, centres of gravity, bending moments and moments of resistance; stresses in cranes, braced towers, roof trusses and bridge trusses. Required of all engineering students. Three hours per week, second term. Mr. Lamb and Mr. Wilson.

83. Mechanics. The course includes the general principles of statics, and of the dynamics of a particle. Motion of a particle under varying force is considered and a knowledge of both differential and integral calculus is essential. Simple harmonic motion is considered (taking the oscillation of springs and pendulums in illustration), and numerous applications of the principles dealt with are worked out. Three lectures per week, second term. Prof. Brown and Dr. Batho.

Text-book:—Morley, Mechanics for Engineers.

Third Year.

86. MECHANICS. The work of the second year course in mechanics is extended, and the dynamical equations for the motion of a rigid body in two dimensions are deduced. Numerous examples are worked in detail, including problems on fly-wheels, kinetic energy of bodies having translation and rotation, oscillation of a rigid body about a fixed axis, impulse, etc. The elementary principles of the gyroscope are also considered. Two lectures per week, first term. Prof. Brown and Dr. Batho.

Text-Book:—Morley, Mechanics for Engineers.

87. STRENGTH OF MATERIALS. This course deals with the fundamental principles of the strength of materials. It includes the following:—Stress, strain, resilience, and the elastic properties of materials used in construction; bending moment and shearing force diagrams; strength, curvature, and deflection of beams; continuous beams; cantilever beams and the like; simple problems on rolling loads; reinforced concrete beams; the strength of shafting; spiral springs; bending combined with tension or compression; elementary consideration of compound stresses; distribution of shearing stress on various sections, etc.

Required of all engineering students. Two lectures per week during session. Prof. Brown, Dr. Batho and Mr. Lamb.

Text-Book:—Morley, Strength of Materials.

88. STRENGTH OF MATERIALS LABORATORY. The work is arranged to illustrate the principles of the lecture course in strength of materials (87), and includes the following:-Tension tests of various materials in 100-ton and 30-ton testing machines; determination of stress-strain diagrams by automatic recorders and by extensometers and scales; deflection of beams, wood and metal; torsion of shafts; deflection and vibration of spiral springs and torsional oscillations of wires; the moment of inertia of fly-wheels by oscillation and falling weight tests; determination of Young's modulus for various materials; complete tests of Portland cement; efficiency of chain blocks, experiments on tension and twisting of wires; bending combined with torsion as in shafting; together with demonstrations on the large testing machines of tensile tests of various materials, the breaking of timber and reinforced concrete beams and small columns, the compressive strength of concrete, bricks, mortars, etc. Three hours per week, second term. Prof. Brown, Dr. Batho, Mr. French, Mr. Wilson.

89. FOUNDATIONS AND MASONRY. Borings; bearing power of soils; piles and pile driving; concrete piles; footings; grillages; underpinning; foundations under water; cofferdam, open dredging, pneumatic and freezing processes; estimation of quantities from drawings; estimates of costs.

Required of Civil Engineering students. Four hours per week, second term. Prof. MacKay, Mr. Lamb, Mr. Wilson.

Text-Book:—Foundations of Bridges and Buildings, Jacoby and Davis.

90. STRUCTURAL DESIGN. Problems in the design of beams, plate girders, columns, roof trusses, knee bracing, etc.; working drawings; reinforced concrete; estimates of quantities; estimates of cost. Required

of Students in Courses III, IV, VI, VII and IX. Four hours per week, second term. Mr. Lamb and Mr. Wilson.

Reference Books:—Ketchum's Structural Engineer's Handbook; Morris, Structural Design; Cambria Steel.

92. RAILWAY ENGINEERING. The locomotive and its work; locomotive and grade problems; effect of distance, rise-and-fall and curvature on train mile costs; estimate of probable receipts and expenditures; economics of location, reconnaissance, preliminary, and location surveys; turnouts, yards and terminals; details of construction; materials of construction. Required of Civil Engineering students: Two hours per week.

93. RAILWAY ENGINEERING. The paper location of a railway, map, profile, earthwork, mass diagram, overhaul, velocity, profile, bill of material and cost estimate of same; the design of a freight yard, detailing of switches and complicated lay-outs and bill of track material. Required of Civil Engineering students. Six hours per week.

97. HYDRAULICS. The fundamental principles of hydraulics are considered and applied to problems on the discharge of orifices, notches, weirs, pipes and open channels under varying conditions; the theory of impact of jets and its application to turbines is also dealt with. Required of Civil Engineering students in the third year and of Mechanical and Electrical Engineering students of the fourth year. Two hours per week, first term. Prof. Brown.

Text-Book:—Hydraulics and its Applications, Gibson.

98. HYDRAULIC LABORATORY. The course is illustrative of the principles considered in course 97, and is taken concurrently. The work includes the following experiments:—Measurement of discharge from orifices, notches and pipes, both straight and bent, to determine hydraulic coefficients; pressure of jets impinging on vanes; tests of Venturi meter, hydraulic ram, Pelton wheel, Girard impulse turbine, Brotherhood reciprocating motor, etc. Three hours per week, first term. Prof. Brown, Dr. Batho, Mr. French.

Fourth Year.

94. THEORY OF STRUCTURES. The analysis of statically determinate framed structures under fixed and moving loads; distortion of framed structures; swing spans; braced arches and arched ribs with two and three hinges; hingeless arches in concrete and reinforced concrete; frames with redundant members.

Required of Civil Engineering students. Four hours per week, first term; eight hours per week, second term. Prof. MacKay, Mr. Lamb.

Reference Books:—Johnson, Bryan and Turneaure's Modern Framed Structures; Marburg, Stresses in Structures.

95. STRENGTH OF MATERIALS. The course includes the following: The bending and deflection of beams loaded in any manner; beams continuous over several supports at the same or different levels; distri-

bution of shear and deflection due to shear; principle of work applied to deflection of beams, trussed beams and some statically indeterminate problems; bending of curved bars, and of unsymmetrical sections such as single angles, etc.; elastic strains; relation between elastic constants; strength of thick shells; earthwork theories; suspension cables; the design of floor and column systems for reinforced concrete buildings (including a critical study of standard specifications); retaining walls, etc.

Required of Civil Engineering students. Two lectures per week during the first term, and one per week during second term, with the equivalent of one-half laboratory period per week throughout the session at times appropriate to the progress of the course. Prof. Brown.

Text-books:—Strength of Materials, Morley; Reinforced Concrete, Taylor and Thompson, or Reinforced Concrete Construction, Vols. II and III, Hool.

96. BRIDGE DESIGN. The reasons governing the selection of a particular type of bridge; discussion of the loads to which the bridge will be subjected; calculation of the stress in the several members; determination of the sectional areas and forms of the members; design of the connections; preparation of complete drawings.

Required of students in Civil Engineering. Eight hours per week. Prof. MacKay, Mr. Wilson.

Reference books:—Kirkham's Structural Engineering; Ketchum's Structural Engineer's Handbook; Waddell's Bridge Engineering.

99. HYDRAULIC MACHINES. The course includes the application of the principles of hydraulics to the determination of formulæ for the design of turbines and centrifugal pumps. Examples are worked showing the methods of finding the leading dimensions of different types of such machines. Representative machines and methods of regulation, etc., are considered in detail. The transmission of power by hydraulic pressure is also considered, and the functions of the accumulator are dealt with, along with the influence of inertia forces in the operation of such machines as reciprocating motors, pumps, riveters, etc. Two hours per week, second term. Prof. Brown.

Text book:—Hydraulics and Its Application, Gibson.

101. HYDRAULICS AND LABORATORY. A short course embodying the hydraulic principles outlined under courses 97 and 98 will be given in the first term. There will be one lecture per week, and six or more laboratory periods at hours to be arranged. Required of Mining, Metallurgical and Chemical Engineering students of the fourth year. Dr. Batho.

Text-book:—Slocum, Elements of Hydraulics.

100. MUNICIPAL ENGINEERING. (*a*) *Sewerage.* General methods and economic considerations; quantity of sewage; storm water run-off; design of sewers and appurtenances; manholes; flush tanks, catch basins, overflows, outlets, siphons, etc.; construction methods, materials and costs; estimates; maintenance and management; problems in design and

estimating. (*b*) *Sewage Disposal.* Physical, chemical, biological and economic aspects of sewage treatment; disposal by dilution; screening, sedimentation, filtration, disinfection, etc.; maintenance and management. (*c*) *Water Supply.* Quantity, quality and pressure required; rainfall and evaporation; pumping machinery; storage; aqueducts, pipe lines and distribution systems; appurtenances—valves, hydrants, etc.; purification systems; fire service; construction methods materials and costs; estimates; problems in design and estimating. (*d*) *Roads and Pavements.* Highway economics; surveys and location; grades; cross sections; paving materials, bituminous, stone, brick, wood, concrete, etc.; construction methods; street cleaning and repairs; estimates; problems in design and estimating. (*e*) *Waste Disposal.* Composition and quantity of city wastes, ashes, garbage, rubbish, etc.; collection; disposal, dumping, land treatment, incineration, reduction, feeding to swine, etc.; costs and returns.

Required of Civil Engineering students in the fourth year. Two hours per week, first term, and five hours per week, second term. Mr. French.

Text-books:—Turneaure & Russell, "Public Water Supplies"; Metcalf & Eddy, "American Sewerage Practice," Vols. 1 and 3.

References:—Folwell, "Sewerage"; Flinn, Weston and Bogert, "Water Works Engineers' Handbook"; Blanchard and Drowne, "Highway Engineering."

102. Railway Engineering. General railway organization, organization and rules of Maintenance of Way department, roadway, ballast, ties, timber preservation, rails, rail fastenings, turnouts, track accessories, structures, stresses in the track, track tools, track work, work train service, maintenance of way records and accounts, programme for expenditures, betterments. Required of Civil Engineering students.

105. Technical Elasticity. The application of Castigliano's Theorem and the Method of Least Work to rectangular frames; beams on elastic supports; reinforced concrete structures, etc.; the theory of riveted joints; Bryan's theorem with applications to the calculation by successive approximations of columns with various types of loading, lateral loads and intermediate supports; comparison with other methods; elastic stability; the vibration of structures; the general equations of elasticity with various applications, special attention being paid to approximate numerical solutions; the strength of flat plates, etc.; the torsion of thin tubes and prisms of non-circular cross-section; the determination of stress distribution by means of polarized light. For graduates. Dr. Batho.

106. Theory of Structures. Secondary stresses due to rigidity of joints, eccentric connections, deflection of floor beams, etc.; frames with redundant members; influence lines for arches and other statically indeterminate structures; critical discussion of specifications for built up members in the light of tests. For graduates. Professor MacKay.

DEPARTMENT OF DESCRIPTIVE GEOMETRY AND FREEHAND DRAWING.

ASSOCIATE PROFESSOR:—HENRY F. ARMSTRONG.
DEMONSTRATORS:———————

This Department provides a general course in drafting office methods and a training in the ground-work necessary to prepare the student for the work required in the Engineering courses of the third and fourth years. The accurate use of drawing instruments is practised and study is made of the various projection methods commonly employed. The problems in Descriptive Geometry are especially designed to develop the power of mentally picturing unseen objects and grasping groups of details.

First Year.

341. DESCRIPTIVE GEOMETRY. Geometrical methods; plane figures; areas; paths of points moving in planes, etc.; projections of points, lines, plane figures and solid objects; shadows, etc.

Three hours per week. Professor Armstrong.

Text-books:—Geometrical Drawing by C. H. McLeod; Descriptive Geometry by H. F. Armstrong.

342. FREEHAND DRAWING. The object of this course is to train the eye to observe and the hand to record the essential characteristics and proportions of objects by means of sketches and diagrams of machines, etc., and to prepare dimensioned sketches from which to make scale drawings. Professor Armstrong.

343. LETTERING. Types and titles such as are chiefly in use in draughting offices, including single-line, block and Roman lettering, and stencils. Professor Armstrong.

Second Year.

345. DESCRIPTIVE GEOMETRY AND PERSPECTIVE. Intersections of surfaces; intersecting planes; tangent planes; axometric, including isometric, projections; perspective projection.

Three hours per week. Professor Armstrong.

Text-book:—Descriptive Geometry, Henry F. Armstrong.

DEPARTMENT OF ELECTRICAL ENGINEERING.

PROFESSOR:—L. A. HERDT.

ASSOCIATE PROFESSOR:—C. V. CHRISTIE.

ASSISTANT PROFESSOR:—E. G. BURR.

LECTURER:—W. D. FOWLER.

DEMONSTRATOR:———————

Third Year.

113. ELECTRICAL ENGINEERING. The theoretical consideration of current flow in circuits; the laws of electro-magnetism and of the magnetic circuit; the theory and operating characteristics of direct current machinery; the principles of alternating current machinery. Required of students in Electrical Engineering. Two hours per week. Professor Christie.

Text-book:—Christie's Electrical Engineering.

114. ELECTRICAL ENGINEERING LABORATORY. Preparation of reports; construction, handling and protection of electrical apparatus; use of instruments and precision of measurement; predetermination of the characteristics of electrical machinery; special and shop testing.

Tests are made in the Laboratory on:—Current flow in circuits; metering and controlling devices, generators, motors, boosters, balancers and motor generator sets; arc and incandescent lamps; reflectors. These tests are intended to illustrate the principles of action and the limits of the proper use of the apparatus. Students are furnished with special laboratory notes. Required of students in Electrical Engineering. Laboratory, six hours per week. Problems, two hours per week. Dr. Herdt.

111. ELEMENTS OF ELECTRICAL ENGINEERING, for third year students in Mechanical Engineering and fourth year students in Civil and Mining Engineering.

A general course in electrical engineering, treating of the laws of electro-magnetism; continuous and alternating current flow in various circuits; characteristics of direct and alternating current machinery; the fundamental principles of electric lighting, power distribution and electric traction. Two hours per week. Mr. Burr. First and second terms.

Text-book:—Gray's Principles and Practice of Electrical Engineering.

112. ELECTRICAL ENGINEERING LABORATORY, for third year students in Mechanical Engineering and fourth year students in Civil and Mining Engineering.

Includes tests of direct current metering and controlling devices, dynamos, motors, boosters, motor generators and constant current machines; experiments of variable current flow in circuits; tests of alternators, synchronous motors and converters, induction motors and transformers, etc. Three hours per week. First and second terms.

Fourth Year.

117. ELECTRICAL ENGINEERING. The treatment of alternating current circuits by vector diagrams and vector equations; the theory and operating characteristics of alternating current machinery. Required of students in Electrical Engineering. Three hours per week. Professor Christie.

Text-book:—Christie's Electrical Engineering.

118. ELECTRICAL ENGINEERING LABORATORY. Tests are made in the laboratory on alternators, synchronous motors and converters, compensators, induction motors, transformers, frequency and phase changing apparatus, potential regulators, rectifiers, etc. Students are furnished with special laboratory notes. Required of students in Electrical Engineering. Laboratory, nine hours per week.

120. ELECTRIC LIGHTING AND POWER DISTRIBUTION. The design and operation of power plants and substations. Transmission and distribution systems are taken up under the following heads:—Selection of generators, transformers, switches and auxiliary apparatus with a study of their characteristics and limitations; wiring diagrams and switchboard design; line design and construction, selection of towers, insulators and conductors, calculation of sags and spans; high voltage and transient phenomena, the protection of overhead lines, cable systems and station apparatus; industrial applications of electrical apparatus; financial considerations. This subject is required of students in Electrical Engineering. Two hours per week, first term. Dr. Herdt.

Text-book:—Standard Handbook for Electrical Engineers.

121. ELECTRIC TRACTION. Urban, inter-urban and main line electrification is taken up under the following heads:—Choice of system and apparatus; calculation of motor rating and car equipment; overhead and track construction; methods of control braking and regeneration; storage batteries and boosters; financial considerations.

This subject is required of students in Electrical Engineering. Two hours per week, second term. Dr. Herdt.

Text-book:—Standard Handbook for Electrical Engineers.

122. ELECTRICAL DESIGN. The electical design of direct and alternating current machinery. Special attention is paid to the limitations of the different types of machines and to the preparations of specifications. Required of students in Electrical Engineering. Lectures, two hours per week. Problem work, three hours per week. Professor Christie.

Text-book:—Gray's Electrical Machine Design.

123. APPLICATIONS OF ELECTRICITY. Lectures on the electrioal supply systems for industrial power and lighting; special problems cf plant design; special problems of lighting in electrical systems; special problems of electrical transmission; electrolysis mitigation of electric

railways. Lectures, two hours per week. Second term. Draughting room, two hours per week. Mr. Burr.

124. Electrical Photometry and Illumination. Electric light production; photometry; illumination; principles of interior and street illumination; industrial and general applications of electric power. First term. Lectures, two hours per week. Draughting room, two hours per week. Mr. Burr.

ENGLISH.

Assistant Professor:—G. W. Latham.

131. English Composition. In view of the importance of accuracy of expression in the case of those engaged in scientific or professional work, a course in English composition is prescribed for all undergraduates of the first year. Students who give evidence of having already reached the required standard of proficiency, by passing a special exemption examination, may be excused from *attendance* on this course. This special examination will be held on Tuesday, September 30th, at 11 o'clock in the Engineering Building.

Students who are required to take this course will be assigned to a section which will meet semi-weekly for practice and instruction in composition.

Satisfactory results in class and essay work must be obtained before entry into the second year. *All undergraduates* of the first year, whether exempt or not from attendance on the course, must pass the final examination.

In connection with this course the following text-books will be used:—Carpenter's "Rhetoric and English Composition" (Macmillan); Aydelotte's "English and Engineering" (McGraw-Hill Publishing Co.)

132. Summer Reading. Second Year. (See page 191.)

133. Summer Reading or Essay. Third Year. (See page 191.)

134. Summer Essay. Fourth Year. (See page 192.)

DEPARTMENT OF GEOLOGY AND MINERALOGY.

Professors:—{Frank D. Adams. J. Austen Bancroft.}

Assistant Professor:—R. P. D. Graham.

Lecturer:—John Stansfield.

Sessional Lecturer:—John A. Dresser.

Third Year.

141. General Geology. The lectures will embrace a general survey of the whole field of geology and will be introduced by a short course on mineralogy. Especial attention will be devoted to dynamical geology and to historical geology, including a description of the fauna and flora of the earth during the successive periods of its past history, as well as to the economic aspects of the subject.

The lectures will be illustrated by the extensive collections in the Peter Redpath Museum, as well as by models, maps, sections and lantern slides. In addition to the lectures there will be a demonstration each week. Dr. Adams.

Text-book:—Scott, An Introduction to Geology.

142. MINERALOGY. The lectures and demonstrations, illustrated by specimens and models, deal mainly with the description and means of identification of species, special attention being paid to the ores and economic minerals and to those which are important as rock constituents. The earlier lectures are devoted to a brief discussion of the geometrical and physical properties of minerals; their chemical composition; calculation of formulæ, etc.; and the principles of classification. Mr. Graham.

143. DETERMINATIVE MINERALOGY. Laboratory practise in blow-pipe analysis and its application to the determination of mineral species. Mr. Graham and Mr. Stansfield.

Fourth Year.

146. PETROGRAPHY. The modern methods of study employed in petrography are first described, and the classification and description of rocks is then taken up.

In addition to the lectures, one afternoon a week during the second term will be devoted to practical work in the petrographical laboratory. Dr. Bancroft, Mr. Graham and Mr. Stansfield.

147. ADVANCED PETROGRAPHY. This is a more advanced course than 146. In addition to the lectures, an afternoon throughout the year will be devoted to practical work in the petrographical laboratory. Dr. Bancroft and Mr. Stansfield.

Text-book:—Harker's Petrology for Students.

The petrographical laboratory is open to fourth year Mining students

148. ORE DEPOSITS AND ECONOMIC GEOLOGY. The nature, mode of occurrence and classification of ore deposits will first be taken up. A series of typical occurrences will then be described and their origin discussed. The more important non-metallic materials, *e.g.*, fuels, clays, building stones, etc., will be similarly treated, as well as questions of water supply, artesian wells, etc. The structure of the earth's crust, more especially with reference to folding, faulting and igneous intrusion in their bearing upon mining, will then be considered, and the course will close with a discussion of the methods employed in carrying out geological and magnetic surveys and in the construction and interpretation of geological maps and sections.

Dr. Bancroft will lecture on economic geology in the first term, and Dr. Adams on ore deposits in the second term

Text-books:—Geikie, Outlines of Field Geology; Kemp, Ore Deposits of the United States and Canada; Lindgren, Mineral Deposits; Beck and Weed, The Origin and Nature of Ore Deposits.

Books of Reference:—The Reports of the Geological Survey of Canada, and the Publications of the U.S. Geological Survey.

149. GEOLOGY OF CANADA. A general description of the geology and mineral resources of the Dominion. Dr. Bancroft.

151. CRYSTALLOGRAPHY. A short course of lectures for students in chemistry, with laboratory practice in the measurement and drawing of crystals; calculation of axial ratios, etc.; use of the polarising microscope, axial angle apparatus, etc. Mr. Graham.

152. HISTORICAL GEOLOGY. This is a continuation of course 141, and will consist of lectures, colloquia and museum work extending throughout the session. Dr. Bancroft and Mr. Stansfield.

153. FIELD WORK. The students in mining will receive a course of instruction in geological mapping and field work—extending over one week—in connection with the summer school of mining. Dr. Bancroft, Mr. Graham and Mr. Stansfield.

154. FIELD WORK. During the ten days immediately preceding the opening of the fall term, a special course in the field methods employed in a geological survey will be given for those students who elect the geological option in the fourth year of the Mining course. Dr. Bancroft, Mr. Graham and Mr. Stansfield.

Note.—Students of the Mining and Chemistry courses take all the mineralogy of the third year. Chemistry students, in addition to the geology of the third year, may take the mineralogy of the fourth year.

LAW AND ECONOMICS.

PROFESSOR OF LAW:—R. W. LEE

PROFESSOR OF ECONOMICS:—STEPHEN LEACOCK

LECTURERS ON ECONOMICS:—FREDERICK B. BROWN, B. K. SANDWELL

171. ECONOMICS. This course is intended to give a general survey of the economic functions of society as they will present themselves to the engineer. The lectures will deal with the production and distribution of wealth the means by which those processes are effected the means by which they are controlled and regulated by the state or the community; the various theories concerning their operation and regulation their effect on society; labor and capital theories of money and credit prices; public finance and taxation. Two hours per week in the second term of the third year. Mr. Sandwell.

Text Book:—Walker's Political Economy.

172. ENGINEERING ECONOMICS. This course is intended to familiarize the engineering student with the business aspect of his profession. With this in view, lectures will be given on the subjects of property and its

transfer; money and credit; stocks and bonds; partnerships and corporations; the banking system; clearing house and trust companies; the formation, organization and financing of companies; operating costs and fixed charges; depreciation and obsolescence; analysis of balance sheet and of profit and loss accounts; valuations; estimates; specifications and contracts. Two hours per week in the first term of the fourth year. Mr. Brown and Mr. Sandwell.

175. LAW FOR ENGINEERS. This course is intended to present such an outline of the law as will be useful to engineers and business men. Among the main topics may be mentioned the general law of contracts and damages; the law of the architect and builder; the statutes affecting labour; commercial paper; sale; lease; agency and partnership; joint stock companies, insurance; carriers by land and sea. One hour per week in the fourth year. Prof. Lee.

DEPARTMENT OF MATHEMATICS.

PROFESSOR:—D. A. MURRAY.

ASSISTANT PROFESSORS:—C. T. SULLIVAN, C. BATHO.

LECTURER:—R. S. L. WILSON

First Year.

191. GEOMETRY. Exercises in plane geometry, elements of solid geometry and of geometrical conic sections. First term. Dr. Sullivan and Mr. Wilson.

Text-book:—Hall and Stevens' School Geometry, Parts I-VI (Macmillan).

192. ALGEBRA. Miscellaneous theorems and exercises, exponential and other series, properties and solution of higher equations, complex numbers, graphical algebra with an introduction to analytic geometry, indeterminate forms, limits, derivatives, slopes of curves. First and second terms. Dr. Murray, Dr. Sullivan and Mr. Wilson.

Text-books:—Rietz and Crathorne's College Algebra (Holt & Co.); Tanner and Allen's Analytic Geometry (American Book Co.) (Macmillan).

193. TRIGONOMETRY. Plane and spherical. Second term. Dr. Sullivan and Mr. Wilson.

Text-book:—Murray's Plane and Spherical Trigonometry, with tables (Longmans).

194. MECHANICS. An elementary course in dynamics, statics, and hydrostatics. First and second terms. Dr. Sullivan and Dr. Batho.

Text-book:—Loney's Mechanics and Hydrostatics for Beginners (Cambridge University Press).

Second Year.

197. ANALYTIC GEOMETRY. The point, straight line, circle, parabola, ellipse and hyperbola, elements of geometry of three dimensions. First

year (latter part of second term), and second year (first term). The second year work begins with the circle. Dr. Murray and Dr. Sullivan.

Text-book:—Tanner and Allen's Analytic Geometry (American Book Co.).

198. CALCULUS. Differentiation of functions of one or more variables, successive differentiation, tangents, etc., curvature, maxima and minima, integration, with application to areas, volumes, moments of inertia, etc. First and second terms. Dr. Murray and Dr. Sullivan.

Text-book:—Murray's Differential and Integral Calculus (Longmans).

Third Year.

201. CALCULUS. Elementary differential equations. Prescribed for Electrical Engineering students of the third year; optional for all others. First and second terms. Dr. Murray.

DEPARTMENT OF MECHANICAL ENGINEERING.

ASSOCIATE PROFESSORS:—C. M. McKERGOW. A. R. ROBERTS.

LECTURERS:—J. A. COOTE. ———

DEMONSTRATORS:—L. H. LAFFOLEY. ———

SHOP INSTRUCTORS:—G. WOOLEY. J. STEWART. W. HARRISON. A. W. MILLER.

First Year.

211. MECHANICAL DRAWING. Instruction in the use of drawing instruments and materials, dimensioning, conventions and standards; preparation of working drawings and tracings of machine details and the detailing of assembly drawings. Required of all students, except architects. Six hours per week. Professor Roberts and assistants.

212. CARPENTRY AND WOOD-TURNING. Sharpening and care of wood-working tools; sawing, planing and paring to size; preparation of flat surfaces, parallel strips, and rectangular blocks; construction of the principal joints employed in carpentry and joiner work, such as end and middle lap joints, end and middle mortise and tenon joints, mitres, dado and sash joints; dovetailing; scarfing; joints used in roof and girder work; wood-turning; use of wood-turning tools. Required of all students, except architects. Three hours per week. Mr. Wooley.

213. SMITH-WORK. The forge and its tools; use and care of smiths' tools; management of fire; use of anvil and swage-block; drawing taper, square and parallel work; bending, upsetting, twisting, punching, and cutting; welding and scarfing. Required of all students, except architects. Three hours per week for one term. Mr. Stewart.

214. FOUNDRY WORK. Moulders' tools and materials used in foundry work; the cupola; the brass furnace; preparations of moulding sand; boxes and flasks; core-making; use of core-irons; bench moulding; blackening, coring and finishing moulds; vents, gates and risers; floor moulding; open sand work; melting and pouring metal; mixtures for iron and brass casting. Required of all students, except architects. Three hours per week for one term. Mr. Harrison.

215. SHOP METHODS. Brief study of woods and of hand and machine tools used in wood-working; manufacture and working of iron and steel; forge and forge tools; welding; stock calculations; steam hammer work; drop forgings; cupola practice; moulders' tools; elementary moulding and core-making. Required of all students, except architects. One half-hour per week. Mr. Coote.

Second Year.

218 MECHANICS OF MACHINES. (*a*) *Kinematics of machines.*—Constrained motion; kinematic pairing; velocity and acceleration in mechanisms; centrodes; analysis and classification of simple mechanisms, including the quadric crank chain, the slider crank chain and various wheel trains; design of involute and of cycloidal wheel-teeth. (*b*) *Dynamics of Machines.*—Work and power; the power and turning effort of prime movers; inertia and kinetic energy of revolving and reciprocating parts of machines. Required of all Engineering students. Three hours per week. Professor McKergow.

Text-book:—Durley's Kinematics of Machines (Wiley).

220. MACHINE-SHOP WORK. Exercises in chipping; preparation of flat surfaces; filing to straight edge and surface plate, scraping, screwing and tapping; use of scribing block and surface gauge; marking off work for lathes and other machines; turning and boring cylindrical work to gauge; surfacing; screw-cutting and preparation of screw-cutting tools; machining flat and curved surfaces on the planing and shaping machines; drilling and boring; cutting angles and speeds; dressing and grinding tools. Required of all Engineering students. Three hours per week. Mr. Miller.

221. SHOP METHODS. Tools; tool steels; forging, hardening and tempering; case hardening; grinding and abrasives; brazing and soldering; modern welding processes; fits and fitting; interchangeable processes of manufacture; lathe construction, adjustments and practice. Required of all Engineering students. One hour per week. Mr. Coote.

Text-book:—Elements of Machine Work, R. H. Smith.

Third Year.

224. MECHANICS OF MACHINES. Mechanisms involving chamber crank trains and chamber wheel trains; helical, skew, and worm gearing; relative motion and displacement; the mechanism of the simple slide valve and of expansion valves; solution of valve setting problems; the function and dynamics of engine fly-wheels and governors; elements of

engine balancing; friction and lubrication. Required of students in Mechanical and Electrical Engineering. Three hours per week. Mr. Coote.

Text-books.—Durley's Kinematics of Machines (Wiley); Ewing's Steam Engine (Camb. Univ. Press).

225. MACHINE DESIGN. Principles of the strength of materials as applied to the design of the part of machines; fastenings used in machine construction, bolts, screws, keys, cotters, rivets, and riveted joints; journals and bearings; shafts and couplings. Required of students in Mechanical and Electrical Engineering. Two hours per week. Professor Roberts.

Text-book:—Unwin's Machine Design, Part I (Longmans). *Book of Reference:*—Spooner's Machine Design (Longmans).

226. MECHANICAL ENGINEERING. General course in Mechanical Engineering of power Plants and Prime Movers.

Fuel and combustion, steam boilers and steam production; corrosion and defects of boilers; boiler plants and accessories, principles of selection and arrangement; the steam engine; estimation of power developed; economy of steam machinery; the indicator; condensers, pumps and accessories; steam turbines; principles of design in steam plants; gas engines and gas producer plants, their selection, economy and arrangement; general conditions governing location and design of power installations. Required of all Engineering students, except those in Mechanical Engineering. Two hours per week. Professor McKergow.

Text-books:—Meyer, Steam Power Plants (McGraw); Duncan, Steam and other Engines (Macmillan).

227. MECHANICAL ENGINEERING. Fuel and combustion; steam boilers and steam production; boiler installation and operation; the indicator; the steam engine, steam distribution and economy; steam turbines; condensers and auxiliary machinery in steam plants; gas engines and gas producer plants; compressed air and refrigerating machinery. Required of students in Mechanical Engineering. Three hours per week. Professor McKergow.

Reference books:—Riper, Heat Engines (Longmans); Nelson, Steam Boilers.

228. MECHANICAL ENGINEERING LABORATORY. Testing and calibration of indicators, brakes and other measuring instruments; investigation of the operation of brakes, dynamometers, and governors; test to determine the efficiency of belt and other transmission gearing; the properties of lubricants; the economy and performance of a steam engine and boiler, of a gas engine, of an air compressor, and of a pump. Required of all Engineering students, except those taking the Electrical Engineering course. Three hours per week. Professor McKergow and assistants.

Reference book:—Carpenter, Experimental Engineering.

223. MECHANICAL ENGINEERING LABORATORY.

First term, course same as 228; second term, experimental work on the relative value of throttling and expansion governors; effect on the economy of steam engine of changing from simple to compound, triple, or quadruple expansion; the testing of steam boilers, producer gas engines, air compressors, steam turbines, and a complete steam power plant test. Required of students in Electrical Engineering Six hours per week in first term and three hours per week in second term. Professor McKergow and assistants.

Reference book:—Carpenter, Experimental Engineering.

229. THERMODYNAMICS. Fundamental laws and equations of thermodynamics; their application to gases and to saturated super-heated vapours; efficiency of ideal heat engines; properties of steam, and elementary theory of the steam engine; elementary theory of gas and hot air engines. Required of third year students in Mechanical and fourth year students in Electrical Engineering. Two hours per week. Professor Roberts.

Text-books:—Ewing, The Steam Engine and other Heat Engines (Camb. Univ. Press); Marks and Davis, Steam Tables. *Reference book:*—Ennis, Thermodynamics Applied to Engineering.

230. MECHANICAL DRAWING. Exercises in making sketches of machine parts and in preparing working drawings and tracings from them. This work may be required of Mechanical Engineering students. Ten hours per week during summer term, between the second and third years. Professor Roberts and assistants.

231. MECHANICAL DRAWING. This course is supplementary to the course in machine design and consists of exercises in design and draughting of fastenings, machine parts and simple machines. Required of Mechanical Engineering students. Six hours per week for the first term and three hours per week for second term. Mr. Coote.

232. MECHANICAL DRAWING. A course similar to 231, but less extended. Required of Electrical Engineering students. Three hours per week.

233. SMITH WORK. Tool forging and tempering, using carbon and high speed steels; making lathe and planer tools; taps, dies, drills, and tools for the forge; special welding. Eleven hours per week for half the summer term, prior to work in third year session. Required of Mechanical Engineering students. Mr. Stewart.

234. FOUNDRY WORK. Moulds requiring a higher degree of skill and judgment than elementary course; special methods of strengthening the mould; coating for smooth surfaces on castings; methods of avoiding defects; cupola charging and operating; core mixtures and core making; coring moulds. For same period as 233. Required of Mechanical Engineering students. Mr. Harrison.

235. PATTERN MAKING. Use of pattern-makers' tools; elements of pattern-making; allowances to be made for draught and for contraction in moulding and casting; use of contraction rule; preparation of prints

and plain core-boxes; exercises in paring and turning; construction of patterns and core-boxes for pipes, flanges, elbows, tees and valves; more difficult exercises in pattern-making, including built-up patterns and face-plate work; gear and wheel patterns. Required of students in Mechanical Engineering. Three hours per week for one term. Mr. Wooley.

236. MACHINE SHOP. Lathe work; marking off; centering; turning and boring; radial facing; filing; grinding and polishing; internal and external screw cutting; change gear calculations; taper turning and bench work. Required of students in Mechanical Engineering. Three hours per week for one term. Mr. Miller.

237. SHOP PROCESSES AND MANAGEMENT. Materials used and methods adopted in the manufacture of patterns; marking-off, machining, fitting and erecting machines; machine drives; boiler-making and plate work; factors of economic production of machine tools; selection of economic cutting conditions; requirements for accurate and interchangeable work; economic movement of material in shop; co-ordination of various factory departments; methods of experimental investigation of shop processes; motion study; science of management. Required of students in Mechanical Engineering. One hour per week. Mr. Coote.

Fourth Year.

240. MECHANICS OF MACHINES. (a) *Valve gears and governors.* Gyrostatic action in machines; further treatment of engine governors; knocking and shocks in reciprocating machinery; valve gears.

(b) *Aeronautics and Aerodynamics.* The principles underlying the stability and weight-supporting power of curved and plane surfaces driven through the air at high velocities, together with the power required to maintain these velocities are studied, and the designs of such machines used for purpose of illustration. Required of students in Mechanical Engineering. Three hours per week. Professor McKergow.

Reference-books:—Dalby's Balancing of Engines; Spangler's Valve Gears; Lanchester's Aerodynamics.

241. DESIGNING. The complete design of an engine, a pump, or a machine tool, is worked out, and the requisite working drawings and tracings are prepared. Required of students in Mechanical Engineering. Three hours per week. Professor Roberts.

242. MACHINE DESIGN. (a). Design of power transmission gearing, including belts, ropes, friction, chain and toothed gearing, fits and fitting. (b) Engine details, including cylinders, piston rods, connecting rods, shafts, fly-wheels and machine frames. Required of Mechanical Engineering students. Two hours per week. Professor Roberts.

Text-book—Unwin's Machine Design, Parts I and II (Longmans) *Reference book:*—Spooner's Machine Design (Longmans).

243. MACHINE DESIGN. Course same as 242 (a). Two hours per week during the first term. Required of Electrical Engineering students. Professor Roberts.

244. Power Plant Design. The arrangement, design and operation of power plants worked by steam and gas engines; effects of requirements for lighting, heating and power distribution. One lecture hour and one drafting room period per week. Required of students in Mechanical Engineering. Professor McKergow.

Text-book:—Gebhardt, Steam Power Plant Engineering.

247. Heating and Ventilation of Buildings. Loss of heat from buildings; radiation surfaces; design and operation of heating systems; principles of ventilation; fans and blowers; design and duct systems; temperature and humidity control. One hour per week. Professor McKergow.

Text-book:—Carpenter, Heating and Ventilating Buildings (Wiley).

249. Mechanical Engineering Laboratory. Experimental investigation of:—engine balancing and vibration; action of governors; performance of fans and blowers; efficiency of hoisting machinery; performance of steam boilers; steam engines, steam turbines, refrigeration machines condensers, gas engines and producers; efficiency of air compressing and pumping machinery; tests of a complete steam power plant, gas power plant, and a heating and ventilating system. Ten hours per week. Required of students in Mechanical Engineering. *Reference book:*—Carpenter, Experimental Engineering. Professor McKergow.

257. Experimental Engineering. Theory of errors; calibration and use of instruments, measurement of power; methods of testing power-plant apparatus and the tabulation of results. Required of students in Mechanical Engineering. One hour per week.

Text-book:—Carpenter, Experimental Engineering.

251. Thermodynamics. Efficiency of the piston steam-engine, behaviour of steam in the cylinder, influence of size, speed, rate of expansion, compounding, superheating and steam-jacketing; flow of gases and vapours through orifices and nozzles and applications to the design of steam-turbines; theory and analysis of performance of internal-combustion engines; refrigerating-machine cycles. Required of students in Mechanical Engineering. Two hours per week. Professor Roberts.

Text-books:—Ewing's Steam Engine (Cambridge Univ. Press); Moyer, Steam Turbines (Wiley); Marks and Davis, Steam Tables and Diagrams (Longmans).

Books of Reference:—Stodola, The Steam Turbine (trans. Lowenstein), (Van Nostrand); Clerk, The Gas Petrol and Oil Engine, Part I.

252. Machine Shop. Experimental work and studies for the minimum time required for production, involving a consideration of the best available machine tool speeds, necessary power of belting, most efficient tool angles, quality of metal and the kind of tool steel used. The course includes work in connection with the lathe, the planer, slotter, shaper, miller and turret lathe; and instruction in gear cutting and cutter grinding. Required of students in Mechanical Engineering. Three hours per week. Mr. Miller.

253. MANUFACTURING PLANT DESIGN. Methods adopted in designing a plant for manufacture of a specified product; lay-out of shops; construction of buildings; equipment requirements for power, heat and light; fire protection; general system of operation and cost determination as affecting design of plant. (Optional with Course 99 [Hydraulic Machines] for students in Mechanical Engineering.) Two lecture hours and one drafting room period per week, second term. Mr. Coote.

Text-book:—Day, Industrial Plants (Engineering Magazine).

254. WORKS, ORGANIZATION AND ACCOUNTING. Analysis of costs of production and establishment charges; elements of factory accounting, factory record systems; depreciation; organization of staff; functions of departments; purchasing systems; methods of remunerating labour; shop organization and equipment as affecting efficiency of production. Work done as far as possible in connection with course 253. Required of students in Mechanical Engineering. One hour per week. Mr. Coote.

Reference book:—Carpenter, Profit-making Management (Engineering Magazine).

DEPARTMENT OF METALLURGICAL ENGINEERING AND METALLURGY.

PROFESSOR:—ALFRED STANSFIELD.
LECTURER:—GORDON SPROULE.
RESEARCH ASSISTANT:—GEO. R. KENDALL

Third Year.

261. GENERAL ELEMENTARY METALLURGY. An introductory course in general metallurgy, including metals and alloys, fuels, furnaces, refractory materials, pyrometry and calorimetry, and a short account of the metallurgy of copper, lead, iron and steel.

The instruction consists of lectures during the first term and a short laboratory course in which the following metallurgical exercises will be carried out, as far as time will permit:— (*a*) Roasting a sulphide or arsenical ore on a small scale and also in the large roasting furnace; (*b*) formation and properties of copper or lead mattes and slags; (*c*) smelting a copper or lead ore in the water-jacketed blast-furnace; (*d*) melting and casting certain metals and alloys; (*e*) the use of the electric furnace; (*f*) leaching a copper or silver ore; (*g*) elementary exercises in some of the following: pyrometry, calorimetry, tests of refractory materials, microscopic examination of metals, heat-treatment of iron or steel, and some simple mechanical testing methods.

Two lectures a week during the first term and one laboratory period during half of the second term. Dr. Stansfield and Mr. Sproule.

262. METALLURGICAL LABORATORY. The course covers in a more thorough manner the laboratory work mentioned in 261, particular attention being devoted to instruction in pyrometry, calorimetry, the microscopic examination of metals and the heat treatment of iron and steel. Two periods in the second term for Metallurgical students.

METALLOGRAPHY. A shorter course of one period a week in the second term is provided for Chemical Engineering students taking the inorganic option in their fourth year. This course consists mainly of the microscopic examination of metals.

263. FIRE-ASSAYING. The lectures and instruction sheets give an account of the furnaces, balances and other appliances used in assaying; the sampling and preparation of ores; fluxes and reagents, and the methods used in assaying gold, silver and lead ores, copper and copper ores and mattes; gold and silver bullion and base bullion; cyanide precipitates and solutions.

In the laboratory the students learn as many of these methods as is possible in the time allotted to this course. Care is taken that a student shall be able to make such assays as would be required at a mine, and with a fair degree of accuracy. Metallurgical and mining students usually have an opportunity of doing additional fire-assaying in their fourth year.

One lecture and two afternoon laboratory periods a week during the first term, for Metallurgical, Mining and Chemical Engineering students. Mr. Sproule.

Reference book:—A. Wraight, "Assaying."

264. METALLOGRAPHY (SUMMER SCHOOL). A course of laboratory instruction in the methods of Metallography and its uses for controlling the heat-treatment of steel and other metals, and for detecting and explaining the nature of defective metallic materials.

This course is given in September before the third year for students in Chemistry II and Metallurgy VIII. Mr. Sproule.

Text-book:—A. Sauveur, "The Metallography and Heat-Treatment of Iron and Steel."

265. METALLURGICAL CALCULATIONS. This is an introductory course on the application of exact chemical and physical laws to metallurgical operations, such as the combustion of fuel, the smelting of ores and the construction and heating of furnaces. One lecture a week for Metallurgical students. Dr. Stansfield.

Text-book:—J. W. Richards, "Metallurgical Calculations," Vol. I.

266. COLLOQUIUM. Metallurgical students have certain hours for reading in the library. They are required to read current metallurgical periodicals and to give an account of their reading at the colloquium which is held once a week. Dr. Stansfield.

267. SUMMER SCHOOL (METALLURGICAL WORKS). Metallurgical students are required to attend the summer school which is held at the end of the third year. In this school visits are paid to metallurgical works both in Montreal and at a distance.

In addition to this, excursions may be made by the class from time to time during the term to such metallurgical works as are within reach.

Fourth Year.

271. METALLURGY (GENERAL).

(*a*) The Metallurgy of copper, lead, gold, silver, zinc and nickel.

(*b*) The metallurgy of iron and steel.

Text-books:—W. Gowland, "The Metallurgy of the non-ferrous Metals"; Bradley Stoughton, "The Metallurgy of Iron and Steel."

Two lectures a week during the session and a few laboratory demonstrations. Dr. Stansfield.

272. METALLURGY. (*a*) A more detailed account of the metals mentioned in 271.

Reference books:—Hofman, "Metallurgy of Copper"; Collins, "Metallurgy of Lead"; Ingalls, "Metallurgy of Zinc"; Collins, "Metallurgy of Silver"; Stoughton, "The Metallurgy of Iron and Steel"; Forsythe, "The Blast Furnace and the Manufacture of Pig Iron."

(*b*) General advanced metallurgy.

Text-books:—Fulton, "Principles of Metallurgy"; Hofman, "General Metallurgy."

(*c*) Metallurgical construction and design, and costs of metallurgical plant and operations.

Required of Metallurgical students. Three hours a week during the session. Dr. Stansfield.

274. METALLURGICAL LABORATORY, THESIS WORK. This time is devoted to the serious study of some metallurgical problem. Usually two students work together and present a thesis containing an account of an important published work bearing on their subject, as well as the result of their own experimental researches. Required of Metallurgical students. One half-period in the first term and three periods a week during the second term.

275. ELECTRO-METALLURGY. This course of lectures is devoted mainly to a consideration of the principles and construction of electric furnaces, and their uses for smelting and refining metals. The refining of metals and the recovery of metals from their ores by electrolysis of aqueous solutions is also considered. Two lectures a week during the second term and demonstrations in the laboratory for Metallurgical, Electrical and Chemical students. Dr. Stansfield.

Text-book:—Alfred Stansfield, "The Electric Furnace."

276. ELECTRO-METALLURGY LABORATORY. The work is arranged to illustrate the lectures. Groups of students operate each of the main types of electric furnace and become familiar with some of the principles of electric furnace construction and design. One period a week during the second term.

277. COLLOQUIUM. One hour a week during the session is given to informal discussion of research and other work being done in the department, and to other topics of metallurgical interest. Dr. Stansfield.

278. METALLURGICAL MACHINERY AND DESIGN. Two periods a week, during the second term, are devoted to drafting and designing metallurgical furnaces and plants. The course includes lectures on metallurgical machinery and design, which are included in 272.

DEPARTMENT OF MINING ENGINEERING.

PROFESSOR:—JOHN BONSALL PORTER.
ASSOCIATE PROFESSOR:—JOHN W. BELL.
DAWSON RESEARCH FELLOW:—A. A. TOUSAW, B.Sc.
DOUGLAS RESEARCH FELLOW:—JOHN M. SCOTT.
HARRINGTON RESEARCH FELLOW:————————

Third Year.

291. MINING ENGINEERING. *The principles and practice of mining.* —Introductory, simple mining methods, excavation, explosives and blasting, rock drills, coal cutters, gold washing and dredging, hydraulic mining, quarrying, etc. Two lectures per week in the second term. This course is continued in the fourth year. (See 297.) Dr. Porter.

292 and 295. ORE DRESSING. *The theory and practice of ore dressing and coal washing.*—The forms in which ores occur and the effect of mixture, impurity, etc.; the theoretical considerations affecting mineral separations; the mechanical operations involved; crushing, sizing and dressing machinery—breakers, stamps, rolls, screens, jigs, vanners, tables, flotation apparatus, washers, magnetic separators, etc. Two lectures per week and laboratory. This course is continued in the fourth year. (See 299.) Dr. Porter.

ORE DRESSING LABORATORY. Simple tests of ores, sands and gravels, by means of pan, classifier, jig, table, etc. One afternoon per week in the second term. Further laboratory work in the fourth year. (See 300 and 301.) Professor Bell.

293. MINE MAPPING. The calculations and plotting of mine surveys. One afternoon per week in the first term. Professor Bell.

Text-books:—H. C. Hoover, Principles of Mining, D. W. Brunton's Safety in Tunnelling, and R. H. Richard's Text-book of Ore Dressing.

Fourth Year.

297. MINING ENGINEERING. *The principles and practice of mining.* —Prospecting, deep wells, diamond drilling, open cut mining, shaft sinking, drifting, underground development and methods of mining, timbering, hauling, hoisting, pumping, lighting, ventilating, etc.; mine accidents and their prevention; general arrangement of plant, stores and dwellings; administration; examination and valuation of mines and mine reports. Three lectures a week. Dr. Porter.

298. Mining and Ore-Dressing Machinery and Design. *The application of mechanical and electrical engineering to mining, ore-dressing and metallurgy.*—Machinery for haulage, hoisting, pumping, ventilating, etc.; mine power plants, power transmission, tramways, cableways, compressors, blowing engines, conveyors, cranes, etc.; mine and mill building, head frames, ore bins, lay-out of plant, etc. One lecture a week, and two drafting room periods in the second term for all students in course and one or two additional lectures per week for students taking certain alternatives. Dr. Porter and Professor Bell.

299. Ore Dressing and Milling. Continuation of the ore-dressing course of the third year. Gold and silver milling, amalgamation, cyaniding, flotation, etc., concentration plants, coal breakers and washers, general conclusions regarding plant design and lay-out. Two lectures a week in the first term. Dr. Porter.

302. Mining Colloquium. One hour a week is given to the presentation and discussion of papers on the work being done in the department and to other matters relating to mining and ore-dressing. Students are required to take a leading part in these exercises.

300. Ore-Dressing Laboratory. Two mornings per week in the first term are given to the ore-dressing and hydraulic laboratories. This time is chiefly assigned to ore-dressing, and certain typical operations are carried out. The exercises in ore-dressing are a continuation of the third year laboratory work, but are arranged as far as possible for individuals rather than groups of students. They comprise experiments in crushing, classifying, jigging, slime treatment, magnetic separation, cyanidation and amalgamation, coal washing, etc.

(Students taking the geological alternative give one morning per week in the first term to petrographical laboratory and only one to ore-dressing and hydraulics, as above.)

301. Ore-Dressing Laboratory and Thesis Work. In the second term one whole day and one additional morning per week are given to individual work in the laboratory and to the preparation of a thesis to be filed in the departmental library, and, when suitable, published.

The subjects available for thesis work are very numerous, and range from purely theoretical investigations in crushing, screening, classification, concentration, flotation, etc., to the experimental determination of the best methods for the treatment of particular ores and coals. A large number of different lots of ore are available in sufficient quantities for work on a comparatively large scale. New ores are constantly being secured.

Text-books:—In addition to the text-books already specified for the third year, students are required to provide themselves with Young's Elements of Mining and the Handbook of Mining Details or the Design of Mine Structures, published by McGraw-Hill Co. In addition to using

these formal text-books, students are required to look up a large number of special references and also to make frequent use of the works named below, those marked with a * being so freely used that they should, if possible, be purchased by each member of the class: Sir C. Le Neve Foster's Ore and Stone Mining; *Donaldsons Practical Shaft Sinking; *Brinsmade's Mining Without Timber; Crane's Ore Mining Methods; *Ketchum's Design of Mine Structures; Mayer's Mining Methods in Europe; *Hughes' Text-book of Coal Mining; Galloway's Lectures on Mining; Boulton's Coal Mining; *McCulloch and Futers Winding Engines; Behr's Winding Plants for Great Depths; Saunders' Mine Timbering; *Storms' Timbering and Mining; Peele's Compressed Air Plant; Richard's Ore-Dressing; Wiard's Theory and Practice of Ore-Dressing; Rickard's Stamp Milling of Gold Ores, Economics of Mining and *Sampling and Estimation of Ore in a Mine; Del Mar's Tube Milling and Stamp Milling; *Thomson's Stamp Milling and Cyaniding; *Julian and Smart's Cyaniding Gold and Silver Ores; Von Bernewitz Cyanide Practice; *Megraw's Details of Cyanide Practice; *Hoover's Concentrating Ores by Flotation; Rickard's Flotation; *Handbook of Milling Details; *The Coal and Metal Miners' Pocket-book; Text-book of Rand Metallurgical Practice, Vols. 1 and 2.

Research Fellowships and Advanced Courses.

Special courses of instruction are offered to graduate students in mining and ore-dressing. These courses include lectures, colloquia and individual work in the laboratories and drafting room. There are three endowed Research Fellowships in the gift of the Mining Department. These are assigned to graduates of the department who show particular aptitude for advanced work.

LABORATORIES.

The specific laboratory instruction in mining subjects proper begins in the third year, with courses in assaying, elementary metallurgy and ore-dressing. In the fourth year this work is elaborated, the general method of instruction being first to conduct a limited number of important typical operations, and then to assign to each student certain methods which he must study out in detail, and upon which he must experiment and make a written report. In this work he is guided by the professors and fellows, and assisted by the other students, whom he must in turn assist when practicable. In this way every student acquires detailed knowledge of certain typical operations and makes at least one original investigation and at the same time gains a fair general experience of many of the important methods in use.

ILLUSTRATIONS, MUSEUMS, SOCIETIES, ETC.

In addition to a large series of lantern slides, the department owns a collection of over four thousand photographs and other illustrations,

and a large and representative library including selected trade catalogues, etc. These collections are constantly being enlarged.

The museums of the building contain suites of ores, concentrates, fuels, and metallurgical materials, models of mines and furnaces, and collections of finished products.

The McGill University Mining Society, and the Mining Society Camera Club meet at stated periods to read and discuss papers by graduate and student members. and occasionally to hear lectures by gentlemen eminent in the profession. The Society has been made a students' section of the Canadian Mining Institute, and its undergraduate members are therefore student members, of the Institute, and receive all its publications. Papers read before the Mining Society may be entered in competition for all students' prizes offered by the Canadian Mining Institute, or the Engineering Institute of Canada.

Field School in Mining.

294. The summer vacation field class, instituted in 1898, is now a fixed part of the course. All students of Mining in regular course are required to attend this class at the end of the third year.

The school lasts from four and one-half to six weeks, depending on where it is held. Of this period about one-sixth is given to field work in geology, one-half or more to mining work proper, and the remainder to an examination of ore-dressing and milling plants and metallurgical establishments. The Professor and the Associate Professor of Mining and a member of the Geological Staff go with the party and hold daily demonstrations or classes. The students take notes and sketches on the ground, and afterwards are required to work up these notes and to submit a formal report.

During the last twenty years these field parties have visited British Columbia eight times, Nova Scotia six times, Newfoundland, Pennsylvania and Michigan twice each. Numerous visits have also been made to Sudbury, Cobalt and other Ontario localities, while *en route* to more distant points.

The instruction given during this field course is free to all Mining students, the only expense to them being the cost of board, lodging, and railway fares. These expenses are kept as low as is practicable and are in part met by the income of a fund provided by the late Sir William Macdonald, from which deserving students who require aid can also have money advanced them by applying to the Professor of Mining.

At the close of the regular work of the field school arrangements are made with the managers of the mines visited and others, to give the members of the party individual employment for the remainder of the summer. All students are earnestly advised to engage in such work, and it is probable that it will be made obligatory at an early date in the future.

DEPARTMENT OF PHYSICS.

PROFESSOR:—A. S. EVE.

ASSOCIATE PROFESSORS:—L. V. KING. J. A. GRAY. A. N. SHAW.

ASSISTANT PROFESSORS:—N. E. WHEELER. H. E. REILLEY.

DEMONSTRATORS:—A. A. SCOTT. E. S. BIELER. G. H. HENDERSON. R. J. CLARK. V. HENRY.

The instruction includes a fully illustrated course of experimental lectures on the general principles of physics, embracing in the first year:—*The Laws of Energy, Heat, Light and Sound;* in the second year, *Electricity and Magnetism*, accompanied by courses of practical work in the laboratory, in which the students will perform for themselves experiments, chiefly quantitative, illustrating the subjects treated in the lectures. Opportunity will be given to acquire experience with all the principal instruments used in exact physical and practical measurements.

First Year.

311. HEAT, SOUND AND LIGHT. Two hours per week. Tuesday and Thursday mornings. Dr. Shaw.

Text-book:—Duncan & Starling's Heat, Light and Sound (Macmillan's) 6s.

312. LABORATORY COURSE. Two hours per week, spent in practical measurements in the Macdonald Physical Laboratory in conjunction with the lecture courses. See time-table of sections.

Text-books:—Laboratory Manuscripts, Barnes & Wheeler (Renouf Pub. Co.)

Second Year.

315. ELECTRICITY AND MAGNETISM. Two hours per week, Monday and Friday mornings. Dr. Gray.

316. LABORATORY COURSE. Two hours per week. (*a*) *Magnetism and Electricity.*—Measurements of pole strength and moment of a magnet; the magnetic field; methods of deflection, and oscillation; comparison of moments and determination of the elements of the earth's magnetism. (*b*) *Current Electricity.*—A complete course of measurements of current strength, resistance, and electromotive force; calibration of galvanometers.

Text-books:—Brooks and Poyser, Magnetism and Electricity; Laboratory Manuscripts (Renouf Publishing Co.).

317. LABORATORY COURSE. An additional course, involving four laboratory periods per week, with lectures, will be given in the month of September, 1919, to certain conditioned students in Electrical Engineering, as part of the third year work introductory to courses 320-321.

Fourth Year.

320-321. LABORATORY COURSE. Students of Electrical Engineering will continue their work in the Physical Laboratory in the fourth year. The following is a brief outline of the course:—

Magnetic elements and measurements; testing magnetic qualities of iron; theory and practice of absolute chemical measurements; comparison and use of electrical standards of resistance, E. M. F., self and mutual-induction, and capacity; testing and calibration of ammeters and voltmeters; insulation and capacity tests; electric light photometry.

Wednesday morning at 10. Laboratory, Wednesday morning and afternoon. Dr. King.

322. ELECTRICAL THEORY. Optional course of lectures for students of Electrical Engineering.

325 to 329. ADVANCED COURSES AND RESEARCH. For advanced courses of lectures, see under honour courses in Arts. There are special facilities offered for those desiring to take up research work in heat, optics, sound, electricity and magnetism, and radioactivity.

DEPARTMENT OF SURVEYING AND GEODESY.

ASSISTANT PROFESSORS:—A. J. KELLY. JAMES WEIR.

This course is designed to give the student a theoretical and practical training in the methods of plane and geodetic surveying, in the field work of engineering operations, and in practical astronomy in its application to geodesy. The lecture course is divided as follows:—

Second Year.

346. SURVEYING. Chain and angular surveying; the construction, adjustment, use and limitations of the transit, level, micrometer, compass and minor field and office instruments; railway circular curves; planimeter and pantograph; general topography; levelling; contour surveying; stadia surveying; land systems of the Dominion and provinces. Mr. Kelly.

Students are required to carry out the following field work:—

347. FIELD WORK. (1). A farm survey, using chain and compass; (2) a compass and micrometer survey; (3) a detail survey, using chain and offset; (4) differential and profile levelling; (5) transit work.

348. MAPPING. Drafting from field notes of chain and angular surveys, and the plotting of topographical features. The tinting of maps with water-colours is also included in this course.

Third Year.

351. MAP PROJECTIONS. Graphical determination of spherical triangles; spherical projections, and the construction of maps; photographic surveying. Mr. Weir.

352. SURVEYING. Theory and use of instruments; hydrographic surveying; the use of the plane table; mining surveying; barometric and trigonometric levelling; elements of practical astronomy. Mr. Weir.

353. SURVEYING. Theory and use of instruments; the use of the plane table; mining surveying; magnetic surveying; hydrographic surveying; barometric and trigonometric levelling; theory and setting-out of transition curves; elements of geodetic surveying; elements of practical astronomy. Mr. Weir.

354. FIELD WORK. (1) Level and transit practice, including the adjustments of the instruments; (2) the preliminary , typographic and location surveys for a railway, including simple, compound, transition and vertical curves, profile levelling, cross-sectioning for construction, and plotting of field notes; (3) a topographic survey with stadia transit; (4) a hydrographic survey of a river channel, including measurement of discharge; (5) a survey at night illustrating under-ground methods; (6) astronomical observations with sextant and engineer's transit.

Fourth Year.

359. GEODESY. The determination of time, latitude, longitude and azimuth; figure of the earth, measurements of base lines and triangulation systems; adjustment and reduction of observations. Mr. Weir.

361. FIELD WORK. (1) Determination of latitude (*a*) by transit and sextant observations of Polaris, (*b*) by zenith telescope, (*c*) by noon observations with transit and sextant. (2) Determination of azimuth, (*a*) by equal altitude observations of the sun, (*b*) by observations of elongation of Polaris, (*c*) by observation of a circumpolar star with engineer's transit, (*d*) by means of solar attachments and solar compass. (3) Determination of time, (*a*) by equal altitude observations of the sun with sextant and transit, (*b*) by observations of the meridian passage of stars with astronomical transit. (4) Determination of longitude by clock comparisons and by lunar observation. (5) Base line measurements. (6) Precision levelling. (7) Measurement of angles by geodetic methods. (8) Plane table surveys.

All students are required to keep complete field notes, and to prepare maps, sections and estimates from their own surveys. This office work is principally done during the regular summer school session.

Field work is required of all students of the second year (except those taking the Practical Chemistry course) of students of the third year in the courses of Civil and Mining Engineering, and of the fourth year in the Civil Engineering course. The work will begin in 1919 on September 2nd, and will continue for four weeks.

360. GEODETIC LABORATORY.

The following determinations of the constants and errors of surveying instruments are made in the geodetic laboratory by the fourth year students in the Civil Engineering course:—(1) Measurement of magnifying power; (2) errors of graduation; (3) measurement of eccentricity of circles; (4) determination of errors of run of theodolite microscopes; (5) investigation of the errors of the graduation of a standard bar; (6) graduating scales with the dividing engine, and comparison thereof on the comparator; (7) investigation of the errors of graduation of circles on the circular comparator; (8) determination of the constants of steel tapes; (9) investigation of the graduation errors of steel tapes on the fifty-foot comparator; (10) determination of the scale value of level vials; (11) investigation of the accuracy of barometers; (12) determination of the collimation error of an astronomical transit by fixed collimators and by nadir method; (13) measurement of inclination error in an astronomical transit by nadir observations.

The determination of gravity by means of the reversible pendulum is experimentally investigated.

The equipment of the surveying department comprises the following, in addition to the apparatus of the observatory and geodetic laboratory:—

Fourteen six-in. transit theodolites with micrometer microscope attachments; seven portable meridian transits; two zenith telescopes; forty-five transit theodolites by various makers with mining, gradienter, stadia, and solar attachments; a photo-theodolite; two 8-in. alt-azimuths; thirty-two dumpy and twelve wye levels; two gradient-telemeter levels; hand levels and clinometers; four precision levels; seventeen surveyors' compasses; one miner's dial; prismatic compasses; pocket compasses; twenty-one marine sextants and artificial horizons; box sextants; two reflecting circles; seven plane tables; five current meters; Rochon micrometers; double image micrometers; heliotrope; barometers; one 100-ft. Invar tape; 300-ft. and 500-ft. steel tapes, suitable for base measurements; steel chains and steel bands; linen and metallic tapes; sounding lines; pickets; levelling rods; micrometer targets; station pointer; pantograph, planimeters; slide rules and other minor appliances.

EXAMINATION FOR LAND SURVEYORS:—Any graduate in the Faculty of Applied Science in the Department of Civil Engineering and Land Surveying may have his term of apprenticeship shortened to one year for the profession of land surveying.

Text-books and books of reference:—Gillespie's Surveying, Johnson and Smith's Theory and Practice of Surveying, Shortland's Nautical Surveying, Greene's Practical and Spherical Astronomy, American Ephemeris and Nautical Almanac, Baker's Engineering Surveying Instruments, Breed and Hosmer's Principles and Practice of Surveying, Turnbull's Underground Surveying.

REGULATIONS CONCERNING PREREQUISITE SUBJECTS.

(1) No student proceeding to a degree will be allowed to take any subject, unless he has previously passed, or secured exemption, in all prerequisite subjects.*

(2) All students proceeding to a degree as above shall be classed as undergraduates or conditioned undergraduates, the latter being students who have defective entrance qualifications or who have failed in one or more of the subjects of their course in the year previous to that in which they are entered.

(3) Except in special cases, as provided below, no undergraduate or conditioned undergraduate shall be permitted to take any second year subject until he has passed or secured exemption in all matriculation requirements, and, similarly, no third or fourth year work may be undertaken until all first or second year subjects respectively shall have been passed or exempted.

The Faculty may waive this rule in special cases on recommendation of the Committee on Registration, Standing and Promotion.

(4) Partial students are those who are not proceeding to a degree. Such students may be admitted to classes without regard to the prerequisite rule, provided that they have obtained the permission of the head of each department concerned, and have also had their courses approved by the Committee on Registration, Standing and Promotion.

(5) If a partial student wishes to obtain undergraduate standing in order to proceed to a degree, he shall not be given credit for subjects taken in contravention of the prerequisite rule until he has also passed examinations or secured exemptions in such preprequisites as may be demanded by the Committee, and, on the recommendation of the Registration Committee, has had his case approved by a unanimous vote of the Faculty.

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*It is to be noted that prerequisite subjects are those which, in the opinion of the Faculty, must have been mastered before the subjects to which they are prerequisite can be intelligently studied.

Concurrent subjects are those which so supplement one another that no one of them can be intelligently studied alone. If any subject has another which is concurrent to it, both must be taken in the same session.

(6) All undergraduates who at the close of any session have passed the examination in all the subjects of their year, or, who at the opening of the following session have removed all conditions by passing supplemental examinations in the subjects in which they have failed, may pass into the next higher year as undergraduates.

(7) All students who have conditions that have not been removed at the opening of any session are conditioned undergraduates. The rules concerning prerequisite subjects make it possible, however, for a student whose failures are not too numerous or too serious, to complete his course in five years instead of four.

No student who has failed to remove all his conditions by the beginning of the second term of the fourth year will be permitted to graduate with his class.

List of subjects in the Faculty of Applied Science with the numbers of subjects which are prerequisite and concurrent.

No.	Year	SUBJECT	Prerequisite	Concurrent
1	II	Arch. Design I	18, 31, 36	6
2	III	" " II	1	7 or 8
3	IV	" " III		7 or 8
4	V	Arch. Design IV		
5	I	Elements of Architecture		
6	II	Elements of Composition		
7	III	Theory of Design	1	
8	IV	Theory of Planning	1	
9	III or IV	Ornament and Decoration	32, 37	
10	III or IV	" " "	32, 37	
11	III or IV	" " "	32, 37	
12	III or IV	" " "	32, 37	
13	I	General History (Arts II)		
14	II	History of Arch. (Classic)		32
15	III or IV	" " (Mediaeval)	13	33
16	III or IV	" " (Renaissance)	13	34
17	V	" " (Modern)	14	
18	I	Architectural Geometry		
19	III	Perspective		
22	IV	Hygiene of Buildings	42, 43	
23	IV	Heating and Ventilation	42, 43	
24	II	Building Construction		
25	II	Building Details		24
26	II	Structural Engineering I		
27	II	Structural Eng. (Draughting)		26
28	IV	Structural Engineering II	82	
29	IV	Structural Eng. (Draughting)	82	28
30	V	Professional Practice	24	
31	I	Architectural Drawing		5
32	II	" "		
33	III	" "		
34	IV	" "		
35	V	Historical Drawing		
36	I	Freehand Drawing		
37	II	" "	36	
38	III	" "	37	
39	IV	" "	38	
40	IV	Modelling		
41	V	"	40	
42	I	Physics ((Arts)		
43	I	Physics Lab. (Arts)		
44	II	Architectural Essay		
45	III	" "		
46	IV	" "		
47	V	" "		
48	II, III, IV, & V	Summer Work		
51	II	General Chemistry	311, 312	52
52	II	Gen. Chem. Lab. (Eng. Students)	311, 312	51
53	II	General Chem. Lab. (Chem. and Met. Students)	311, 312	75
54	II	Inorg. Qual. Anal. (Chem. and Met. Students)	53	55, 75
	III	Inorg. Qual. Anal.—Summer School (Chem., Eng. and Met. Eng. Students)	51, 52	55

No.	Year	Subject	Prerequisite	Concurrent
55	II	Inorg. Qual. Anal. Lab. (Chem. and Met. Students)	53	54, 75
	III	Inorg. Qual. Anal. Lab.—Summer School (Chem. Eng. and Met. Eng. Students)	51, 52	54
56	III	Organic Chemistry	(51, 52) or (75, 53)	57
57	III	" " Lab		56
58	III	Physical Chemistry	(51, 52) or)75, 53)	
59	III	Inorg. Qual. Anal	51, 52	60
60	III	" " " Lab		59
61	III	" Quant. "	51, or75, 52or 53	62 or 67
62	III	" " " Lab. (Chem. Eng. Students)		61
64	IV	Advanced Organ. Chem	56, 57	65
65	IV	Organic Chem. Lab	56, 57	64
66	IV	Physical Chem. and Lab	58	
67	IV	Inorg. Lab. (Chem. Eng. Students)	61, 62	
68	IV	Industrial Chemistry, Inorganic	61, 62 or 76	
69	IV	Industrial Chemistry, Organic	61, 62 or 76	
70	IV	Applied Electro-Chem. and Lab	51, 52	
71	IV	Mineral Anal. (Min'g Students)	59, 60	
72	IV	Adv. Inorg. Chemistry	58	
73	IV	Food Chemistry	56, 57	66
74	IV	History of Chemistry	51, or 75, 56	
75	II	General Chemistry (Chemistry Students)	311, 312	53
76	III	Inorg. Quant. Anal. Lab. (Chem. Students)		61
77	IV	Inorg. Lab. (Chem. Students)	61, 62	
81	II	Materials of Construction		
82	II	Graphical Statics	194	
83	II	Mechanics	194	198
86	III	Mechanics	83, 198	
87	III	Strength of Materials	83, 198	
88	III	" " " Lab		87
89	III	Foundations and Masonry		87
90	III	Structural Design		87
92	III	Railway Eng	83, 346, 347, 348	
93	III	" "		92
94	IV	Theory of Structures	86, 87	
95	IV	Strength of Materials	86, 87	
96	IV	Bridge Design	90	94
97	III & IV	Hydraulics	83	
98	III & IV	" Lab		97
99	IV	" Machines	86	97
100	IV	Municipal Engineering		97
101	IV	Hydraulics and Lab. (Short Course)	83	
102	IV	Railway Eng	92, 93	
111	III & IV	Elements of Elec. Eng	198, 315, 316	
112	III & IV	Elec. Eng. Lab. (Elementary)		111
113	III	Electrical Engineering	198	
114	III	Elec. Eng. Lab		113
117	IV	Electrical Engineering	113, 114, 201	320, 321
118	IV	Elec. Eng. Lab. (Elec. Eng. Students)	113	117
120	IV	Elec. Light and Power Distrib		117, 118

No.	Year	SUBJECT	Prerequisite	Concurrent
121	IV	Electric Traction		117, 118
122	IV	Electrical Designing	232	117, 118
123	IV	Applications of Electricity	113	117
124	IV	Elec. Photometry and Illumination	113	117
131	I	English Conposition		
132	II	Summer Reading		
133	III	Summer Reading or Essay		
134	IV	Summer Essay		
141	III	Geology, General		
142	III	Mineralogy	51, or 75	
143	III	" Determinative	51, or 75	
146	IV	Petrography and Lab	141	
147	IV	" (Advanced)	1411, 142, 143	
148	IV	Ore Deposits and Economic Geol	441	
149	IV	Geology of Canada	11	
151	IV	Crystallography	142	
152	IV	Geology, Historical	141, 142, 143	
153	IV	Geology Fieldwork (with 294)	141, 142, 143	
154	IV	" " (alt. a)		
171	III	Economics		
172	IV	Engineering Economics	171	
175	IV	Engineering Law		
191	I	Geometry		
192	I	Algebra		
193	I	Trigonometry		
194	I	Mechanics		
197	II	Analytic Geometry	192	
198	II	Calculus	192	
201	III	Calculus	198	
211	I	Mechanical Drawing		
212	I	Carpentry and Wood Turning		
213	I	Smith Work		
214	I	Foundry Work		
215	I	Shop Methods		
218	II	Mechanics of Machines	191, 192, 194	198
220	II	Machine Shop Work		
221	II	Shop Methods		
223	III	Mech. Eng. Laboratory		226
224	III	Mechanics of Machines	83, 218	
225	III	Machine Design		87, 231 or 232
226	III	Mech. Eng. (General Course)	51	228
227	III	" " (Mech. Eng. Students)	51	228
228	III	" " Lab		226, 227 or 373
229	III	Thermodynamics	51, 198	
231	III	Mech. Drawing (Mech. Eng. Stud.)		225
232	III	" " (Elec. Eng. Stud.)		225
233	III	Smith Work (Summer School)	213	
234	III	Foundry Work (Summer School)	214	
235	III	Pattern Making	212	
236	III	Machine Shop Work	220	
237	III	Shop Processes and Management		235, 236
240	IV	Mechanics of Machines	224	
241	IV	Designing	225, 231	242
242	IV	Mach. Design (Mech. Students)	225	
243	IV	Mach. Design (Elec. Students)	225	
244	IV	Power Plant Design	227	
245	IV	Locomotive Engineering	227	244

No.	Year	Subject	Prerequisite	Concurrent
246	IV	Marine Engineering	227	244
247	IV	Heating and Vent'n of Buildings	227	244
249	IV	Mech. Eng. Lab	227, 228	
251	IV	Thermodynamics	228, 229	
252	IV	Machine Shop Work	236	
253	IV	M'f'g. Plant Design		
254	IV	Works Org. and Accounting	237	252
257	IV	Exp. Engineering	227, 228	249
261	III	General Elem. Metallurgy	51	
262	III & IV	Metall. Lab. and Metallography		261 in YearIII
263	III	Fire Assaying	(51 or 52) or (53 or 75)	
264	III	Metallography		
265	III	Metall. Calculations		261
266	III	Metall. Colloquium		261
267	IV	Summer Sch. (Metall. Works)		
271	IV	Metallurgy (General)	261	
272	IV	" (Metall. Students)	261	271
274	IV	Metall. Lab. Thesis	262	271
275	IV	Electro-Metallurgy	51	
276	IV	" " Lab		275
277	IV	Metall. Colloquium	261	271
278	IV	Metall. Machinery and Design	261	271
291	III	Mining Engineering		
292	III	Ore Dressing and Lab	51	
293	III	Mine Mapping	346, 348	
294	III	Mining Field School	141	
295	III	Ore Dressing (Chem. Eng. Students)	51	
297	IV	Mining Engineering	291	
298	IV	Mining Machinery and Design	81, 82, 226, 299	297
299	IV	Ore Dressing and Milling	292	
300	IV	" " Lab	292	299
301	IV	" " " Thesis Work	263, 300	
302	IV	Mining Colloquium		297, 299
311	I	Physics		
312	I	Physical Lab		311
315	II	Physics		
316	II	Physical Lab		315
320	IV	Physics (Elec. Eng)	315, 316	
321	IV	Phys. Lab. (Elec. Eng.)		320
341	I	Desc. Geometry		
342	I	Freehand Drawing		
343	I	Lettering		
345	II	Descriptive Geo. and Perspective	341	
346	II	Surveying	191, 193	
347	II	Surveying Fieldwork		
348	II	Mapping	342, 343	
351	III	Map Projections	341, 345	
352	III	Surveying (Miners)	346, 347	
353	III	Surveying (Civils)	346, 347	
354	III	Surveying (Fieldwork)	346, 347	
359	IV	Geodesy	351	
360	IV	Geodetic Lab		359
361	IV	Geodetic Fieldwork	353, 354	
400	IV	Military Science		

EXAMINATION TIME TABLES—FACULTY OF APPLIED SCIENCE.

I.—Supplemental Examinations.

Supplemental examinations for all subjects of the First, Second and Third Years Applied Science are held in August or September. A schedule of these examinations may be obtained from the Dean.

II.—Sessional Examinations.

Note.—The following numbers correspond with the subjects in the prerequisite list and the departmental descriptions.
( ) indicates that the examination will be held in the first year drafting room.
[ ] indicates that the examination will be held in one of the drafting rooms or laboratories of the department concerned.
Bold-faced type shows that the examination will be held in the Molson Hall with the Arts classes.
Examinations begin at Nine A.M. and Two P.M., and normally last three hours.

First Term

Date.		First Year.	Second Year.	Third Year.	Fourth Year.
Saturday, January 17th	A.M.	....	....	(11) (261) (351)	(68) (243) (299) (359)
" "	P.M.	....	....	....	(120)
Monday, January 19th	A.M.	....	....	(58) (86) (263)	(120) (124) (149) (263)
" "	P.M.	....	....	....	(70)
Tuesday, January 20th	A.M.	(191)	(197)	(295) (352)	(97) (101)
" "	P.M.	13	(53)	(61)	(71)

II.—Sessional Examinations—Second Term.

Date.		First Year.	Second Year.	Third Year.	Fourth Year.
Tuesday, April 20th	A.M.	(42)	(83)	....	(64) [146] (244)
" "	P.M.	(341)	(6)	(113) (237) (292) (353)	[151]
Wednesday, April 21st	A.M.	....	(315)	(12) (226) (227)	[100] (117) (251) (297)
" "	P.M.	(5) (311)	(26)	(89)	(17) (72)
Thursday, April 22nd	A.M.	(192)	(82)	[28] (56) (229)	[28] (68) (95) (229) (254)
" "	P.M.	....	(81)	(88) (262)	(148) (262)
Friday, April 23rd	A.M.	(131)	....	(15) (16) (87)	(16) (94) (121) (271)
" "	P.M.	**13**	(218)	(19)	(66) (240)
Saturday, April 24th	A.M.	....	[24] (51) (75)	(141) [224]	[30] (73) (123) (241) (298)
" "	P.M.	(18)	....	[141]	(175)
Monday, April 26th	A.M.	[31] (215)	....	(23) (291)	(122)
" "	P.M.	....	(14) (198)	(171) (320)	(67) [96] (242)
Tuesday, April 27th	A.M.	(194)	[1]	[2] (90)	[3]
" "	P.M.	....	[1] (346)	[2] (223) (228) (265)	[3] (99) (147) (253) (275)
Wednesday. April 28th	A.M.	(193)	[1]	[2] (59) (201)	[3] (245) (246) (247)
" "	P.M.	....	[1] (52) (54)	[2] (92) (111)	[3] (111)
Thursday, April 29th	A.M.	....	(221)	[142] (225)	(74) [152] (257)
" "	P.M.	....	....	....	(249)

III.—TIME TABLES FOR LECTURES.

Complete time tables for all lectures and laboratory work are bulletined in the Engineering Building, and copies of these time tables may be obtained from the Dean of the Faculty of Applied Science.

FACULTY OF LAW.

LECTURES IN THIS FACULTY FOR THE SESSION 1919-1920 WILL COMMENCE ON THURSDAY, OCTOBER 2ND, 1919.

STUDENTS MAY REGISTER AT ANY TIME DURING THE WEEK PRECEDING THE COMMENCEMENT OF LECTURES.

MATRICULATION.

Particulars regarding the Matriculation Examination are given on pages 43 to 60.

The attention of students who intend to practise law in the Province of Quebec, or to be admitted to the notarial profession, is called to the statutory requirements for admission to study. These will be found on page 251. A certificate of admission to study, granted after examination by the General Council of the Bar, or by the Board of Notaries, is accepted in place of the Matriculation Examination.

PRIZES AND MEDALS.

See pages 82 and 83.

FEES.

See page 89.

GENERAL INFORMATION.

Students have the free use of the Law Library of the Faculty, to which large additions are continually being made. The principal reports and legal periodicals are taken. A special room for Law students is provided in the University Library. The room is open during the day, and in the evenings from 7.30 to 10.30 o'clock.

There is a lending library of Law-books. The use of text-books may be obtained for the session on payment of an ad valorem fee.

Moot courts are held from time to time during the session in order to afford practice in the presentation of legal arguments.

DEGREES IN LAW.

The degrees in the Faculty of Law are the LL.B., B.C.L., LL.M. and D.C.L. The last two are placed under the supervision of the Committee on Graduate Studies. Particulars will be found on pages 277 and 279.

THE DEGREE OF LL.B.

The LL. B. degree is designed to supply a wide and sound education in Law, both for those who do not intend to follow the profession of the Law, and for those who do. To the first class it offers as part of a general education a training in the methods of legal thinking, and affords the opportunity of studying legal science in relation to social and commercial life. Those who have followed it will not be qualified to practise Law—this is not intended—but they will acquire a knowledge of law from the inside which will enable them to control their professional advisers and to approach any simple legal problem with a justified confidence in their ability to handle it. It is anticipated that the course will prove particularly attractive to students who are looking forward to a career in business, journalism or public life.

For the second class of students—those who intend to practise Law—the LL.B. curriculum provides a valuable course of preliminary study.

The course of study for the LL.B. degree extends over four years. The first two years are taken in the Faculty of Arts. In the third and fourth years the following subjects are studied:—

1919-1920.

Constitutional Law.
Jurisprudence.
Private International Law.
Commercial Sales.
Agency and Partnership.
Bills of Exchange.
Legal History (Common Law).
Elements of Contract and Tort (Common Law).

In addition one full course or two half courses may be taken from the work prescribed for the third and fourth years in the Faculty of Arts.

1920-1921.

Roman Law.
Obligations (Civil Law).
Public International Law.
Insurance.
Shipping and Carriers.
Corporations.

In addition one full course or two half courses may be taken from the work prescribed for the third and fourth years in the Faculty of Arts.

Candidates for the LL.B. degree who previously to entering upon their studies for the degree have qualified for a degree in Applied Science or Medicine, are admitted to the third year of the LL.B. course without having taken the first and second years of that course in the Faculty of Arts.

THE DEGREE OF B.C.L.

For the B.C.L. degree the Faculty provides three courses of study. Two of these (Courses A and B) extend over three years, and one (Course C) extends over four years.

Three-year Courses for the Degree of B.C.L.

COURSE A is primarily designed for students who intend to practise at the Bar of the Province of Quebec or as notaries in the Province. This course is open to students who have previously graduated in other Faculties and to returned soldiers.

COURSE B is designed to meet the needs of students who intend to practise law in a common law jurisdiction, whether in the other Provinces of Canada, the British West Indies, the United States of America or elsewhere. This course is open to students who have satisfied the requirements of the Matriculation Board.

The two courses are to a large extent identical. They include the study of Roman Law, the Constitutional Law and History of Canada and of the Empire, Public and Private International Law, all the principal branches of Commercial Law, Criminal Law and Procedure and the Law of Evidence. COURSE A includes further a thorough study of the Civil Law and Civil Procedure of the Province of Quebec. COURSE B substitutes for this, the study of the principles of Common Law and of Equity and of the related procedure.

Lectures are delivered on all the subjects included in both courses.

The subjects studied in the different years ars as follows:—

FIRST YEAR.

Courses A and B.

Roman Law.

Constitutional and Administrative Law.

Course A

Legal History (Quebec).
Obligations.
Real Property.
Law of Persons.
Procedure.

Course B.

Legal History (Common Law).
Jurisprudence (Historical and Analytical).
Elements of Contract and Tort.
Obligations.

SECOND AND THIRD YEARS.

Courses A and B.

Roman Law (special subjects).
Criminal Law and Procedure.
Municipal Law.
Public International Law.
Private International Law.
Agency and Partnership.
Bills of Exchange and Banking.
Commercial Sales.
Corporations and Companies.
Insurance.
Merchant Shipping and Carriers.
Evidence.

Course A.

Real Rights and Registration.
Lease.
Prescription.
Marriage Covenants.
Minor Contracts.
Successions and Gifts.
Wills, Substitutions and Trusts.
Civil Procedure.

Course B.

Common Law.
Equity.
Procedure.

The Faculty desires to impress upon English students who intend to practise law in the Province of Quebec, the great importance of obtaining a familiar knowledge of French. In this Province it is indispensable that a lawyer should be able to write and speak the French language.

Four-year Course for the Degree of B.C.L. (Course C.)

This Course *may* be taken by all candidates for the B.C.L. degree, and *must* be taken by all such candidates (other than *Course B.* students) who are not graduates or returned soldiers. Before admission to this

Course, students must have satisfied the requirements of the Matriculation Board. The first two years of the course cover the same ground as the two legal years of the Course for the LL.B degree (p. 242), with the addition of Legal History (Quebec), Real Property Law (Quebec) and Civil Procedure (Quebec). The third and fourth years of the Course cover the same ground as the second and third years for the B.C.L. degree, *Course A* (p. 243), with the omission of subjects already studied in the first and second years, and with the addition of the Law of Persons (Quebec), which is taken in the third year.

The subjects studied in the four years will therefore be as follows:-

1919-1920. Constitutional Law, Jurisprudence, Sale of Moveables, Agency and Partnership, Bills of Exchange and Banking, Private International Law, Legal History (Common Law), Elements of the Common Law, together with Real Property Law (Quebec).

1920-1921. Roman Law, Obligations (Quebec), Insurance, Shipping and Carriers, Corporations, Public International Law, together with Legal History (Quebec) and Civil Procedure (Quebec).

1921-1922. Roman Law (Special Topic), Criminal Law and Procedure, Municipal Law, The Law of Evidence, Real Property Law (P.Q.), Wills, Substitutions and Trusts (P.Q.), Marriage Covenants and Minor Contracts (P.Q.), Civil Proceedure (P.Q.), Law of Persons (P.Q.).

1922-1923. Roman Law (Special Topic), Criminal Law and Procedure, Real Property Law (P.Q.), Successions and Gifts (P.Q.), Lease, Hire and Prescription (P.Q.), Civil Procedure (P.Q.).

Combined Course for the Degrees of LL.B. and B.C.L.

Students who have followed the course and taken the examination qualifying them for the Degree of LL.B. and who have in addition attended lectures and passed examinations in Legal History (Quebec), Real Property Law, and Civil Proceedure of the first year of the B.C.L. curriculum (*Course A.*) may proceed to the B.C.L. Degree in two years by pursuing the studies of the third and fourth years of the four-year course (*Course C.*).

Except as above provided, no student will be allowed to pursue the Course for the LL.B. concurrently with the Course for the B.C.L.

CERTIFICATES OF PROFICIENCY IN LAW.

The Faculty is prepared to admit a limited number of persons to the lectures of the third year of the LL.B. course without having passed the matriculation examination. Persons so admitted will pursue the regular course of study for the LL.B. degree, or such other course as the Faculty may direct. Having completed the prescribed course and having passed a satisfactory examination in the prescribed subjects, they will be entitled to receive a certificate of proficiency in law.

GENERAL REGULATIONS.

1. Undergraduates shall be known as of the first, second, third or fourth year, and shall be so graded by the Faculty. In each year, students shall take the studies fixed for that year, and those only, unless by special permission of the Faculty.

2. At the end of each college year there shall be a general examination of all the classes, called the sessional examination, under the superintendence of the professors, and of such other examiners as may be appointed by the Corporation. The examination shall be conducted by means of printed questions, answered by the students in writing.

3. At the end of the last year of the course there shall be an examination, called the final examination, of those students who have completed the curriculum. This examination shall be conducted by written papers, which may be supplemented by an oral examination. It shall cover all the subjects upon which lectures have been delivered during the whole course for the degree. Those students who satisfy the examiners shall be entitled, after making the necessary declaration and payment of the graduation fee, to proceed to the degree of LL.B. or of B.C.L., as the case may be. There shall be no sessional examination of students who are candidates in the final examination.

4. No student shall be considered as having kept a session unless he shall have attended regularly all the courses of lectures, and shall have passed the sessional examinations to the satisfaction of the Faculty in the classes of his year.

5. The Faculty shall have the power, upon special and sufficient cause shown, to grant a dispensation to any student from attendance on any particular course or courses of lectures, but no distinction shall in consequence be made between the examinations of such students and those of the students regularly attending lectures.

6. On the following days, when they fall within the session, no lectures will be delivered, *viz.:* Ash Wednesday, Good Friday, Easter Monday and Thanksgiving Day. On the following days the morning lectures will be omitted, *viz.:* All Saints' Day (Nov. 1st), and Conception Day (Dec. 8th).

EXAMINATION RULES

1. In each examination the pass mark is 50 per cent.

2. In the final examination the maximum in Roman Law and Civil Proceedure is 200 marks, and in all other subjects 100 marks. In the first year the maximum in Roman Law is 200 marks.

3. No student who fails in more than one subject in any sessional examination shall be allowed the year: Provided that a student who has failed in not more than two subjects and has obtained 50 per cent of the

aggregate total of marks may make good his standing by passing a supplementary examination before the beginning of the following session.

4. In the final examination no student who fails in any one subject will be held to have passed unless he obtains 60 per cent. of the aggregate total; and no student who fails in any two subjects will be held to have passed unless he obtains 65 per cent. of the aggregate total; Provided that a student who has failed in not more than two subjects but has obtained 50 per cent. of the aggregate total, may make good his standing by passing a supplementary examination at the beginning of the following session or at such later time as the Faculty may appoint.

5. A fee of $5 must be paid for the supplementary examination in each subject.

EXAMINATIONS FOR THE LL.B. DEGREE.

The standard of attainment for the degree of LL.B. will be such as may from time to time be determined by the Faculty of Law.

COURSES OF LECTURES.

ROMAN LAW.

PROFESSOR:—R. W. LEE.

The course on this subject is intended to accompany the study of the Institutes of Justinian, with the text of which students are expected to become acquainted.

Text-books:—For the historical part, Walton's Historical Introduction to the Roman Law (3rd ed.); and for the Institutes, Sandars' Institutes of Justinian.

Book of Reference:—Sohm's Institutes of Roman Law, translated by Ledlie (3rd ed.) ; Girard, Manual élémentaire de Droit Romain ; Poste's Institutes of Gaius; Buckland, Elementary Principles of the Roman Private Law ; Maine's Ancient Law.

ROMAN LAW (SPECIAL TOPICS).

PROFESSOR:—R. W. LEE.

Lectures will be given to the second and third years, on a selected title of Justinian's Digest. The title for the session 1919-1920 will be Dig. XLI.I (*de adquirendo rerum dominio*).

CONSTITUTIONAL AND ADMINISTRATIVE LAW.

Professor:—R. W. LEE.

The object of this course is to explain the fundamental principles of Parliamentary government and of the Rule of Law in the British Constitution. Particular attention is paid to the organization of the Empire. In the second part of the course the B. N. A. Acts are commented

upon, and the leading cases discussed which illustrate the respective powers of the Federal and Provincial Legislatures.

Students are expected to read Dicey, Law of the Constitution (new edition, 1915), and Sidney Low, The Governance of England (1914). Reference may also be made to Anson, Law and Custom of the Constitution; Keith, Responsible Government in the Dominions, and Imperial Unity and the Dominions; Houston, Constitutional Documents of Canada; Kennedy, Documents of the Canadian Constitution; Lefroy, Canada's Federal System; Lefroy, Constitutional Law of Canada.

Students should supply themselves with copies of Lefroy, Leading Cases in Canadian Constitutional Law.

OBLIGATIONS.

PROFESSOR:—A. GEOFFRION.

A course of fifty lectures, dealing with the main principles of the law of obligations, including contracts, quasi-contracts, offences and quasi-offences, the effect, the various kinds, and the extinction of obligations.

LEGAL HISTORY AND BIBLIOGRAPHY.

PROFESSOR:—ARCHIBALD MCGOUN.

This course comprises an outline of the history of the Law in force in the Province of Quebec, including Constitutional History up to Confederation.

AGENCY AND PARTNERSHIP.

PROFESSOR:—ARCHIBALD MCGOUN.

This course explains the principles of the law of Mandate and Partnership, as laid down in the Civil Code of Lower Canada, and also treats of commercial agency.

MUNICIPAL LAW

PROFESSOR:—ARCHIBALD MCGOUN.

This course is given in alternate years with the course on Agency and Partnership.

It includes an outline of the general principles of municipal law and deals particularly with the Municipal Code of 1916 and the Government of Cities and Towns in the Province of Quebec.

LAW OF CORPORATIONS AND OF JOINT STOCK COMPANIES.

PROFESSOR:—G. W. MACDOUGALL.

General course on organization of companies under the Dominion and Quebec Companies Act. Nature of various securities; rights and powers of directors and shareholders; amalgamation and reorganization of companies; winding-up proceedings.

PERSONS.

LECTURER:—ARNOLD WAINWRIGHT.

This course covers the law of acts of civil status, absentees, marriage, separation, divorce, filiation, minority and interdiction.

CRIMINAL LAW.

PROFESSOR:—HON. SIR CHARLES DAVIDSON.

ASSOCIATE PROFESSOR:—HON. MR. JUSTICE GREENSHIELDS.

This course includes:—

A history of the criminal law and criminal procedure of England, and of their introduction into and development throughout Canada; discussion of the Criminal Code and other statutes enacting criminal offences; of the rules of evidence in criminal cases; of the Fugitive Offenders' Act; of extradition; and, generally, of the principal features belonging to the criminal law of the Dominion.

COMMERCIAL LAW, I.

PROFESSOR:—E. E. HOWARD.

The subjects dealt with include commercial sales and the law of insurance.

The course on commercial sales includes the fifth title of the Civil Code, in so far as applicable to sales of moveables, and a comparison of the common law rules and remedies.

COMMERCIAL LAW, II.

LECTURER:—S. L. DALE HARRIS.

This course is divided into two parts of twenty-five lectures each which are taken up in alternate years.

Part I covers bills of exchange, promissory notes and other negotiable instruments, banking and stock exchange transactions.

Part II covers merchant shipping, including the jurisdiction of civil procedure in the Court of Admiralty, carriers of goods and carriers of passengers.

During the session 1919-1920 Part I will be taken up.

CIVIL PROCEDURE, I.

PROFESSOR:—E. FABRE SURVEYER.

This course of lectures, for the first year, deals with the articles of the Code (1 to 214 inclusive) which refer to ordinary pleadings, exclusive of incidents. The course deals also with judgments by default to appear or to plead and judgments upon confession (C. P. 418 to 420 and 527 and 548),

amendments to pleadings (513 to 526), procedure in summary matters (1150 to 1162), before the Superior and Circuit courts (1120 to 1149), the Commissioners' Court and the District Magistrate's Court (1253 to 1291). It includes the schedules and rules of practice referring to the above mentioned articles and the forms of the most common kinds of pleadings.

CIVIL PROCEDURE, II.

PROFESSOR:—E. FABRE SURVEYER.

The advanced course for the second and third years covers all matters of procedure not dealt with in the first year course, and includes trial, provisional remedies, such as capias, attachment before judgment, injunction, etc., and special proceedings, such as proceedings relating to corporations and public offices, mandamus, etc., as well as the rules of pleading in the more complicated classes of action. It is divided into two parts, taken in alternate years.

SUCCESSIONS, GIFTS, WILLS, SUBSTITUTIONS AND TRUSTS.

PROFESSOR:————————

Two titles of the Civil Code, that of Successions, and that of Gifts *inter vivos* and by Will are here explained. The order of the Code is followed so that the whole subject is divided, somewhat unequally, into two courses given in alternate years.

First Course:—Successions and Gifts, approximately 35 lectures.

Second Course:—Wills, Substitutions and Trusts, about 30 lectures.

MARRIAGE CONVENANTS AND MINOR CONTRACTS; LEASE AND HIRE, PRESCRIPTION.

LECTURER:—W. F. CHIPMAN.

Two courses—in alternate years.

During the session 1919-1920 the subjects dealt with will be Marriage Covenants and Minor Contracts.

REAL PROPERTY LAW.

PROFESSOR:—W. DE M. MARLER.

FIRST YEAR COURSE:—

Distinction of things; ownerships, usufruct—Civil Code, 374-498—modes of acquisition of property—Civil Code, 583-595.

SECOND AND THIRD YEAR COURSES:—50 lectures in alternate courses.

First Course:—Modes of acquisition of immoveables:—25 lectures.

Second Course:—Privileges on immoveables and hypothecs; servitudes —25 lectures.

PUBLIC INTERNATIONAL LAW.

PROFESSOR:—E. LAFLEUR.

Sovereignty and equality of independent states; recognition of belligerency and independence; justifiable grounds of intervention; modes of territorial acquisition; territorial boundaries; doctrine of exterritoriality; treaties and arbitrations; laws of war; neutrality of states and individuals; laws of blockade; contraband; confiscation; prize-courts and their jurisprudence.

The students' attention will be specially directed to treaties, diplomatic relations, and international arbitrations, in which Canada is directly concerned.

PRIVATE INTERNATIONAL LAW.

PROFESSOR:—G. W. MACDOUGALL.

Distinction between the *a priori* and positive methods; sources of the positive law of Quebec on the subject; application and illustrations of the rules for solving conflicts of law; comparison between our jurisprudence and that of England, France and the United States.

EVIDENCE.

LECTURER:—ARNOLD WAINWRIGHT.

This course consists of an explanation of the main principles and rules of evidence in the civil and commercial matters governed by the provisions of the Civil Code.

In the course of the lectures articles 1203 to 1244 of the Civil Code, and such articles of the Code of Civil Procedure as relate to the subject of Evidence, will be commented upon and explained.

LECTURES SPECIAL TO THE B. COURSE.

Particulars with regard to these courses may be obtained from the Dean of the Faculty.

APPENDIX.

The attention of intending students is called to the following provisions of the Revised Statutes of Quebec and amendment, as bearing on the requirements for the study and practice of law in the Province.

1. REGULATIONS APPLICABLE TO THOSE WHO INTEND TO BECOME MEMBERS OF THE BAR.

N.B.—The articles are here abridged.

Article 4522 R.S.Q.—Examinations for admission to study and to practise law in the Province of Quebec are held at the time and place determined by the General Council.

The examinations are held alternately in Montreal and Quebec every six months; namely, at Montreal, on the second Tuesday of each January, and at Quebec on the first Tuesday of each July.

All information concerning these examinations can be obtained from the Secretary-Treasurer of the General Council. The present General Secretary is Mr. Victor Martineau, K.C., 66 St. James Street, Montreal.

Article 4524.—Candidates must give notice, as prescribed by this article, at least one month before the time fixed for the examination, to the Secretary of the section in which he has his domicile or in which he has resided for the past six months.

Article 4475.—This article provides that candidates holding the degree of Bachelor of Arts, Bachelor of Science, or Bachelor of Letters, from any Canadian or British University are dispensed from the examination for admission to study. Such candidates are required to give the notice mentioned above.

Article 4526 R.S.Q. (as altered by by-law of the General Council). —On giving the notice prescribed by Article 4524, the candidate pays the Secretary a fee of $2.00, and makes a deposit of $125.00 for a complete certificate of admission to study; of $70.00 for a partial certificate of admission to study; and of $200.00 for admission to practice, which deposit, less $30.00, is returned in case of his not being admitted.

Article 4531.—To be admitted to practice, the student must be a British subject and must have studied regularly and without interruption during ordinary office hours, under indentures entered into before a notary, as clerk or student with a practising advocate during four years, *dating from the registration of the certificate of admission to study.* This term is reduced to three years in the case of a student who has followed a regular law course in a university or college in this Province and taken a degree in law therein.

The By-laws passed by the General Council of the Bar of the Province of Quebec, provide as follows:—

Article 51.—A course of lectures on law given and followed at a university or law school of this Province, and the diploma or law degree conferred on students by such university or law school, shall count with reference to the Bar Act, only if the course of study hereinafter outlined has been effectively followed by the university or law school and by the holder of the diploma. (R.S.Q., ss. 1483 §4531).

Article 52.—A regular law course in a university or law school of this Province consists of seven hundred and eighty-five lectures of one hour each. These lectures are given on the various subjects in the following proportions:

Roman Law:—103 lectures:—This course comprises an introduction to the study of law, with explanatory remarks and comments on the Institutes of Justinian and on the principal Roman jurisconsults.

Civil, Commercial and Maritime Law:—413 lectures.—The course on these subjects must cover a period of at least three years. It comprises the history of French and Canadian law, explanatory remarks and comments on the Civil Code and on the statutes respecting commerce and shipping.

CIVIL PROCEDURE:—103 lectures—This course must extend over at least two years. It comprises explanatory remarks and comments on the Code of Civil Proceedure and of its statutory amendments, a study of the organization of the civil courts of this Province and the history of the different judicial systems of the country; also the special modes of procedure provided by the statutes and by the by-laws in general, as well as the Bar Act and the By-laws regarding the discipline of the Bar.

PUBLIC AND PRIVATE INTERNATIONAL LAW:—21 lectures.—This course comprises an historical outline, the sources of this law and of its subject matter, its objects (primary and secondary rights of sovereign states), rules of war, commercial and extradition treaties, etc. in force in Canada, as well as the rights and obligations of the citizens of the Province of Quebec and of Canada, and of aliens in the event of conflict of laws.

CRIMINAL LAW:—69 lectures.—This course comprises the history of Canadian criminal law, the organization of the criminal courts, criminal procedure, comments on the criminal law of the country, a comparative study of English and Canadian criminal law. The lectures shall extend over two years.

CONSTITUIIONAL AND ADMINISTRATIVE LAW:—41 lectures.—This course comprises an enquiry into the different constitutional enactments and public institutions of the country, the powers, the organization, the procedure of the Federal Parliament and of the Provincial Legislatures, the laws on Education, and the Municipal Code.

COMPARATIVE LAW:—30 lectures.—This course comprises a concise enquiry into the English common law, and a general knowledge of the main principles underlying the civil and commercial laws of the other Provinces of Canada.

Article 53.—The candidate for admission to practice who has obtained a law degree from a university or law school of this Province, must file, together with this notice, a certificate from the principal or head of such university or law school establishing that he has followed a law course in such university or law school during at least three years in conformity with the Bar Act, and moreover specifying the number of lectures he has actually attended in each subject comprised in the foregoing curriculum during each of the three years and during the three years as a whole.

Article 54.—The examiners must refuse to accept such degree as valid under the provisions of the Bar Act, if they are of the opinion that the course of study hereinabove outlined has not been effectually followed by the candidate.

II. REGULATIONS APPLICABLE TO THOSE WHO INTEND TO BECOME NOTARIES.

For the regulations applicable to candidates for the notarial profession, see Revised Statutes of Quebec, Arts. 4774-4807.

TIME TABLE OF LECTURES FOR THE B.C.L.

(three years course).

FACULTY OF LAW.

SESSION 1919-1920.

FIRST YEAR.

Thursday, October 2nd, 1919, to Friday, January 9th, 1920, (14 weeks).

Roman Law	The Dean	9.30 a.m	M., W., Fr.
Constitutional Law	The Dean	4.00 p.m.	T., Th.
Legal History (P.Q.)	Prof. McGoun	8.30 a.m.	M., W., Fr.
Property Law	Prof. Marler	4.00 p.m.	M. W., Fr.
Obligations	Prof. Geoffrion	8.30 a.m.	T., Th.
Procedure	Prof. Surveyer	5.00 p.m.	T., Th.
Law of Persons	Prof. Surveyer	5.00 p.m.	Fr..
Jurisprudence		5.00 p.m.	M., W.

Thursday, January 15th, 1920, to Friday, April 16th, (13 weeks).

Roman Law	The Dean	9.30 a.m.	M., W., Fr.
Constitutional Law	The Dean	4.00 p.m.	T., Th.
Obligations	Prof. Geoffrion	8.30 a.m.	T., Th.
Procedure	Prof. Surveyer	8.30 a.m.	M., W., Fr.
Jurisprudence		5 00 p.m.	M., W.

SECOND AND THIRD YEARS

Thursday, October 2nd, 1919, to Friday, January 9th, 1920 (14 weeks).

Wills, Substitutions		8.30 a.m.	M., W.
Real Property	Prof. Marler	4.00 p.m.	T., Th.
Private International	Prof. MacDougall	5.00 p.m.	T., Th.
Procedure	Prof. Surveyer	8.30 a.m.	T., Fr.
Criminal Law	Prof. Greenshields	5.00 p.m.	M., W.
Marriage Covenants	Mr. Chipman	8.30 a.m.	Th., Sat.
Evidence	Mr. Wainwright	5.00 p.m.	Fr.
Roman Law (Dig. XLI.1)	The Dean	4.00 p.m.	M.

Thursday, January 15th, 1920, to Friday, April 16th. (13 weeks).

Criminal Law	Prof. Greenshields	5.00 p.m.	M., W.
Marriage Covenants	Mr. Chipman	8.30 a.m.	Th., Sat.
Agency, Partnership	Prof. McGoun	8.30 a.m.	M., W.
Procedure	Prof. Surveyer	8.30 a.m.	T.
Sale of Moveables	Prof. Howard	5.00 p.m.	T., Th.
Evidence	Mr. Wainwright	5.00 p.m.	Fr.
Bills and Notes	Mr. Dale Harris	4.00 p.m.	W., Fr.
Roman Law (Dig. XLI.1)	The Dean	4.00 p.m.	M.

TIME TABLE OF LECTURES FOR THE LL.B. AND B.C.L. COURSES.

SESSION 1919-1920.

This time table applies to students who are taking (1) the LL.B. course alone; or (2) the combined course for LL.B. and B.C.L.; or (3), the four year course for the B.C.L. The courses of lectures printed in italics are included in (2) and (3), but not in (1). The first two classes of students may take in addition one whole or two half courses in the Faculty of Arts curriculum of the Third and Fourth Years.

FIRST YEAR (*First Term*).)

	8.30	9.30	4.00	5.00
Mon.			*Real Property*	Jurisprudence
Tues.	Common Law		Constitutional	Private International Law
Wed.			*Real Property*	Jurisprudence
Thurs.	Common Law		Constitutional	Private International Law
Fri.	Legal History		*Real Property*	*Persons*

FIRST YEAR (*Second Term*).

	8.30	9.30	4.00	5.00
Mon.	Agency and Partnership			Jurisprudence
Tues.	Common Law		Constitutional Law	Sale
Wed.	Agency and Partnership		Bills and Notes	Jurisprudence
Thur.	Common Law		Constitutional	Sale
Fri.	Legal History		Bills and Notes	*Persons*

FACULTY OF MEDICINE.

The Eighty-eighth session of the Faculty of Medicine will be opened on Wednesday, October 1st, 1919. The regular lectures in all subjects will begin on Thursday, October 2nd, at the hours specified in the time-tables, and will continue until a date in May to be fixed by the Faculty.

FOUNDATION AND EARLY HISTORY.

The Faculty of Medicine of McGill University is the direct outcome and continuance of a teaching body known as the Montreal Medical Institution, which was organized as a medical school in the year 1823 by Drs. Wm. Robertson, Wm. Caldwell, A. F. Holmes, John Stephenson and H. P. Loedel. These men constituted the first medical staff of the Montreal General Hospital, itself established in 1819. The first session of the Montreal Medical Institution opened in November, 1824, with 25 students, and the lectures were given at the house of the Institution, No. 20 St. James Street, a building situated on the north side of St. James Street, at or near Place d'Armes.

In the year 1829, the Montreal Medical Institution became, by the formal act of the Governors of the Royal Institution for the Advancement of Learning, the Medical Faculty of McGill University. It is thus the oldest Faculty of the University. The first session of the McGill Medical Faculty took place in the winter of 1829-30, and the first university degree, a medical one, was conferred four years later, in 1833.

There were no sessions held during the political troubles of 1836 to 1839, and it is owing to this fact that this is the eighty-seventh instead of the ninetieth session of the Faculty, dating from its incorporation with the University in the year 1829.

The work of the Faculty was carried on in the central part of the city until 1872, when a building was provided by the Governors on the University grounds. This building met the demands of the steadily increasing number of students until 1885, when an addition was found to be necessary.

In 1893, and again in 1898, further extensions and alterations were made, funds for the purpose having been provided by generous friends of the Faculty.

On the 16th of April, 1907, a part of these new buildings, together with the original medical building, was destroyed by fire. The wing containing the principal laboratories and lecture rooms was saved, however, and is now used by the Departments of Physiology and Medical Chemistry.

The erection of a new building was at once begun on a new site, at the corner of Pine Avenue and University St., and in 1910 the greater part of it was ready for occupation. In 1911 it was wholly available

for the work of the Faculty which can now boast of one of the most modern and well-equipped medical buildings on this Continent.

MATRICULATION.

For particulars see pages 43 to 60.

PHYSICAL EXAMINATION.

For information see page 63.

REGISTRATION.

See page 66.

BOARD AND RESIDENCE.

See page 69.

FEES.

See page 87.

REQUIREMENTS FOR LICENSE TO PRACTISE.

Intending students are reminded that a University degree in Medicine does not always give a right to practise the profession of medicine. It is necessary to conform with the medical laws of the country or province in which it is proposed to begin practice. Each province in Canada at present has its special requirements for license and in most provinces a special standard of general education is insisted upon before beginning the study of Medicine. Students who intend practising in Canada are warned that in certain of the provinces it is necessary to be registered five years before obtaining a license to practise. It follows that entrance qualifications must be registered in the province in which the student intends to practise at the beginning of his course in Medicine.

For the convenience of students, a list of names and addresses of the Registrars of the Medical Councils in the several provinces is here given. They should comply with the requirements for registration in one or other of the provinces, before entering on their course in the Faculty of Medicine.

QUEBEC.—Dr. J. Gauvreau, Dandurand Bldg., corner of St. Catherine and St. Denis Streets, Montreal.

ONTARIO.—Dr. H. Wilberforce Aikins, 170 University Avenue, Toronto.

NEW BRUNSWICK.—Dr. Stewart Skinner, St. John.

NOVA SCOTIA.—Dr. W. H. Hattie, Halifax.

PRINCE EDWARD ISLAND.—Dr. James Warburton, Charlottetown.

NEWFOUNDLAND.—Dr. H. Rendell, St. John's.

MANITOBA.—Dr. J. E. Coulter, Winnipeg.

ALBERTA.—C. E. Race, Esq., B.A., Registrar University of Alberta, Edmonton.

SASKATCHEWAN—Dr. G. A. Charlton, Regina.

BRITISH COLUMBIA.—Dr. A. P. Proctor, Vancouver.

DOMINION REGISTRATION.

In order to take the examinations of the Medical Council of Canada a candidate must have the license of a Canadian province or he must present a certificate from the Registrar of a Provincial Medical Council that he holds a medical degree accepted and approved of by the Medical Council of said province.

Full information may be obtained by writing to the Registrar, Dr. R. W. Powell, 180 Cooper Street, Ottawa, Ontario.

GENERAL COUNCIL OF MEDICAL EDUCATION AND ENREGISTRATION OF GREAT BRITAIN.

The Matriculation Examination in Medicine of this University is accepted by the General Medical Council of Great Britain. Graduates of this University who desire to register in England are exempted from any examination in preliminary education on production of the McGill Matriculation certificate. Certificates of this University for attendance on lectures, practical work and clinics are also accepted by the various examining boards in Great Britain. To obtain a license from the General Council it is necessary to pass one of the examining boards of Great Britain in both primary and final subjects.

Detailed information may be obtained from one of the three registrars: Henry E. Allen, B.A., 299 Oxford Street, London; James Robertson, 54 George Street, Edinburgh; Richard J. E. Roe, 35 Dowson Street, Dublin.

RECIPROCITY WITH GREAT BRITAIN.

The General Council of Medical Education and Enregistration of Great Britain has entered into reciprocal relations with the Medical Councils of the Provinces of Quebec, Ontario, Nova Scotia, Prince Edward Island, Saskatchewan, Manitoba and New Brunswick. A holder of a degree in Medicine of McGill University who has obtained the license of the Province of Quebec, may register with the Medical Council of Great Britain. He will thus be eligible for competitive examination for the Army, Navy and Civil Service, and will be allowed to practise in Great Britain, South Africa, Australia, India and the West India Islands without further examination.

COURSE OF STUDY FOR THE DEGREE OF M.D., C.M.

Commencing with the Session 1919-20, the undergraduate course in Medicine will extend over six years, except in the case of persons who have been on active service and who enter in 1919.

FIRST YEAR

(Of the six-year course.)

Biology (General Biology and Zoology).
Chemistry.
Physics.
English and another cultural subject.

The requirements for second, third, fourth and fifth year students during the session 1919-20 will be as follows:—

SECOND YEAR

Anatomy.
Chemistry (Biological and Organic).
Physiology.
Histology.
Pharmacy.

THIRD YEAR

Anatomy (Neurology).
Physiology.
Pathology (General).
Bacteriology.
Chemistry (Physiological and Clinical).
Parasitology.
Pharmacology.
Medicine (Clinical).
Surgery (Clinical).
Microscopy (Clinical).

In this year the students visit the hospitals for the first time and receive instruction in small groups in the elements of clinical medicine and surgery.

FOURTH YEAR

Anatomy (Medical and Surgical).
Hygiene.
Medical Jurisprudence.
Pharmacology and Therapeutics.
Medicine and Clinical Medicine.
Surgery and Clinical Surgery.
Obstetrics.
Gynæcology.
Mental Diseases.
Ophthalmology.
Oto-Laryngology.
Pediatrics.
Pathology.

In this year two medical and two surgical theatre clinics are given weekly in the Montreal General and Royal Victoria hospitals. Out-patient clinics are given to groups of students twice weekly in gynæcology and once weekly in ophthalmology and oto-laryngology. In addition, on four days of the week instruction is given to groups at the bedside,

in the laboratories, and in the medical and surgical out-patient departments. The work in hygiene consists of lectures, demonstrations and laboratory work.

FIFTH YEAR

Medicine and Clinical Medicine.
Surgery and Clinical Surgery.
Obstetrics.
Gynæcology.
Ophthalmology.
Oto-Laryngology.
Pathology.
Dermatology.

In this year most of the students' time is spent in the hospitals. Theatre clinics are given on three days of the week in each hospital in medicine and surgery. There are also daily ward classes to groups of students in these branches. In the out-patient departments of both hospitals clinics are given to groups of students in the various special branches of gynæcology, ophthalmology, oto-laryngology, dermatology, neurology, orthopædics, pediatrics and genito-urinary diseases. Clinics, ward classes and demonstrations in obstetrics are given in the new Maternity Hospital. Students of the fourth and fifth years attend the Alexandra Hospital in groups for instruction in infectious diseases. The clinical instruction in mental diseases is given in the wards of the Protestant Hospital for the Insane at Verdun.

MEDALS, PRIZES AND FELLOWSHIPS.

See page 81.

QUALIFICATIONS FOR THE DEGREE.*

1. No one will be admitted to the degree of Doctor of Medicine and Master of Surgery who shall not have attended lectures for a period of six eight-month sessions in this University, or some other university, college or school of medicine, approved by this University (except in the case of those who have already completed the work of the First Year). Students of other universities, so approved, who may be admitted on production of certificates to a like standing in this University shall be required to pass an examination in primary subjects, and all examinations in the final subjects in the same manner as students of this University.

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* It should be understood that the programme and regulations regarding courses of study and examination contained in this calendar hold good for this calendar year only, and that the Faculty of Medicine, while fully sensible of its obligations towards the students, does not hold itself bound to adhere absolutely, for the whole of a student's course, to the conditions here laid down.

2. Candidates for the final examination shall furnish testimonials of attendance on the following branches of medical education; provided, however, that testimonials equivalent to, though not precisely the same as those stated, may be presented and accepted:—

Biology, General Chemistry, Practical Chemistry, Physics, Histology, Embryology, Anatomy and Practical Anatomy, Physiology and Practical Physiology, Organic Chemistry, Biological Chemistry, Physiological Chemistry, Pharmacy, General Pathology, Bacteriology, Clinical Microscopy, Pharmacology, Therapeutics, Medical Jurisprudence, Hygiene and Public Health, Medical and Surgical Anatomy, Operative Surgery, Special Pathology, Morbid Anatomy, Clinical Chemistry, Principles and Practice of Surgery, Clinical Surgery, Theory and Practice of Medicine, Clinical Medicine, Obstetrics and Diseases of Infants, Gynæcology, Pediatrics, Mental Diseases, Ophthalmology, Oto-Laryngology.

He must also produce certificates of having assisted at six autopsies, of having dispensed medicine for a period of three months, of having assisted at twenty vaccinations, and of having, under the direction of a properly qualified anæsthetist, administered an anæsthetic at least six times.

Courses of less length than the above will only be received for the time over which they have extended.

3. No one will be permitted to become a candidate for the degree who shall not have attended at least one full session at this University.

4. Every candidate must give proof of having attended during at least twenty-four months the practice of the Montreal General Hospital or the Royal Victoria Hospital, or of some other hospital of not fewer than 100 beds, approved by this University.

5. He must give proof of having acted as clinical clerk for six months in medicine and six months in surgery in the wards of a general hospital recognized by the Faculty, and of having reported at least ten medical and ten surgical cases.

6. He must also give proof of having attended for at least nine months the practice of the Montreal Maternity or other lying-in hospital approved by the University, and of having acted as assistant for at least twenty cases.

7. Every candidate for the degree must, on or before the 20th day of April, present to the Registrar of the Medical Faculty testimonials of his qualifications, entitling him to an examination, and must at the same time deliver to the Registrar of the Faculty an affirmation or affidavit that he has attained the age of twenty-one years.

8. The examinations to be undergone by the candidate shall be in the subjects mentioned on pages 258 to 260.

9. The following oath or affirmation will be exacted from the candidate before receiving his degree:—

Ego, A—— B——, Doctoratus in Arte Medica titulo jam donandus, Sancto coram Deo cordium scrutatore, spondeo:—me in omnibus grati animi officiis erga hanc Universitatem ad extremum vitæ halitum persevaturum; tum porro artem medicam caute, caste et probe exercitaturum; et, quod in me est, omnia ad ægrotorum corporum salutem conducentia cum fide procuraturum; quæ denique inter medendum visa vel audita silere conveniat, non sine gravi causa vulgaturum. Ita præsens mihi spondenti adsit Numen.

EXAMINATIONS

Frequent oral examinations are held to test the progress of the student, and occasional written examinations are given throughout the session.

Class examinations are held during the session in each of the first year subjects, the marks obtained being added to the total marks obtained at the final examinations.

If the standing obtained by any student in the class examinations is not satisfactory, he shall not be permitted to take the final examinations.

1. A minimum of 50 per cent. in each subject is required to pass and 75 per cent. for honours.

2. The work of one session must be completed and all examinations passed before a student is permitted to advance to the next.

3. Students who fail at the regular examinations in not more than three subjects of the first or second year and in not more than two subjects of the third and fourth years, may, at the discretion of the Faculty, be allowed to take the supplementary examinations before the beginning of the following session. These examinations will be held during the week preceding the regular opening of the session.

Those who fail in more subjects than are above specified are not eligible for supplemental examinations.

4. Students who fail to pass in a subject in which practical work is required may, at the discretion of the examiner, be required to repeat the course and furnish a certificate of attendance thereon.

5. Students who fail in one subject only of the final year may, at the discretion of the Faculty, be allowed a supplemental examination in that subject. Should the subject be one in which practical or clinical work is required, the student must furnish a certificate of additional hospital attendance or laboratory work before presenting himself for examination.

6. Students who fail at the examination held at Christmas may, at the discretion of the examiners, be granted suppplemental examinations at a period not less than three months after the regular examinations.

7. A student who, after being registered in the first, second, third or fourth years for three successive sessions, fails to qualify for advancement, or who, after being registered in the final year for three successive sessions, fails to qualify for the degree, shall not be permitted to register again as a student of Medicine in the University.

8. Applications for supplemental examinations must be in the hands of the Registrar at least three days before the date set for the beginning of the examination, and they must be accompanied by a fee of $5.00 for each subject.

MICROSCOPES AND HAEMOCYTOMETERS.

Each student is required to provide himself, on beginning his studies, with a first-class microscope for laboratory and private study throughout his course. The Faculty will supply the instruments necessary for demonstrations, etc. The microscope must be of substantial construction and be provided, as a minimum, with the following accessories, $\frac{2}{3}$, $\frac{1}{6}$ and $\frac{1}{12}$ oil immersion, and a substage condenser. Such an instrument will last a life-time and is an essential part of the equipment of a practitioner in medicine.

Should the students entering the Faculty of Medicine in, or after, September 1919, not be provided with such microscopes, they may purchase new guaranteed instruments from the Purchasing Department of the University for the sum of $80.00 each.

All other students in the Faculty of Medicine requiring microscopes will be allowed to purchase those which they are at present renting at a price to be determined by the Purchasing Department of the University, due allowance being made for any sums paid on account of rental.

Each student of the third year is required to have a hæmocytometer, and, in order that an instrument of uniform value and accuracy may be in the hands of all students, the University has purchased a supply, which will be sold at cost price.

DOUBLE COURSES.

See pages 106 and 111.

COURSES OF LECTURES.

Details of the work done in the several subjects of the course for the M.D. degree will be found in the special calendar issued by the Faculty.

DENTAL DEPARTMENT.

GENERAL ANNOUNCEMENT.

In the autumn of 1903 the Dental Association of the Province of Quebec approached the University, asking that a dental department be instituted in connection with the Medical Faculty, and, as a result of negotiations continuing through the session of 1903-04, the University has established such a department. This department is not independent, but is a section of the Medical Faculty.

Under the regulations that have been established governing the Dental Department, students may register in dentistry after passing the matriculation required of students of medicine in McGill University; but those wishing to practise in the Province of Quebec, except those who hold a degree in Arts from a recognized British or Canadian university, must pass the matriculation examination of the College of Dental Surgeons of the Province of Quebec.

The course demanded of students in this department extends over four years and leads up to the degree of D.D.S. In the first year the curriculum is that demanded of students in the Medical Faculty for the same period, with the addition of short courses in dental histology and dental anatomy. In the second year, students of dentistry finish their course in anatomy at Christmas; the course in chemistry is not so extensive as for the medical student, and special lectures are given in physiology, pharmacology and histology. There are also courses in operative dental technique, prosthetic technique and dental anatomy for second-year students. The practical work of the last two years is conducted in the laboratories of the Dental Department in the College and in the dental clinic of the Montreal General Hospital. Special courses of lectures are delivered at the McGill Medical College.

CLINICAL INSTRUCTION.

The establishment of an out-patient clinic in dentistry by the authorities of the Montreal General Hospital has enabled the University to offer its students an abundance of clinical material. During the third and fourth years the greater part of the student's time is spent in the clinic, where he receives the personal attention of a competent staff of instructors.

REQUIREMENTS FOR THE DEGREE.

The degree of Doctor of Dental Surgery (D.D.S.) will be conferred by McGill University on any student who has fulfilled the following requirements:—

1. He must be of the full age of 21 years.
2. He must be of good moral character.
3. He must have passed all required examinations.
4. He must have completed the full term of four years.
5. He must have paid all fees.

For full particulars of the Dental Department, consult the special catalogue of the Department, a copy of which will be sent on application to Dr. J. W. Scane, Registrar of the Medical Faculty.

DEPARTMENT OF PHARMACY.

Particulars regarding the Department of Pharmacy are given in a separate announcement, which can be obtained on application to the Registrar of the Faculty of Medicine.

DEPARTMENT OF MUSIC.

LOCAL EXAMINATIONS.

Public local examinations are held yearly at various centres throughout the Dominion by examiners sent out by the University.

These examinations may be looked upon as preparatory to the examinations for diplomas and degrees in Music granted by the University. There are in most of the subjects five grades, and certificates gained in the higher grades will exempt the candidate from certain portions of the examinations for a diploma or degree.

DIPLOMA OF LICENTIATE IN MUSIC.

Candidates for this diploma may elect to be examined in one of the following:—

Theoretical subjects and composition.....(Class I)
Practical subjects as performers.....(Class II)
Both theory and practice as teachers.....(Class III)

The candidate must pass three examinations.

First Examination:—

(a) Rudiments of music, including sight reading and ear tests.
(b) Harmony in four parts up to, and including, dominant 9th. (A practical test will be substituted for performers.)
(c) Counterpoint in two parts. (Practical test substituted for performers.)
(d) Chief subject of study.

The possession of the Highest Grade certificate of the local theoretical examinations will exempt candidates in Class I from this examination. In Class II, exemption may be claimed if the candidate has passed the Highest Grade (practical) and the Senior or the Intermediate Grade (theoretical) of the local examinations.

In Class III candidates must hold the Senior Grade (theoretical) and the Highest Grade (practical) certificates in order to claim exemption.

In the *Second and Third examinations*, between which a year must elapse, the requirements for Classes I and III are, on general lines, similar to those for the first and second Mus. Bac. examinations respectively. In the case of Class II, practical tests are substituted for many of the theoretical tests. Candidates in Class III will, in the final examination, have to pass in "The Art of Teaching Music," which will be partly *viva voce* and partly paper work.

In both the Licentiate and Mus. Bac. examinations, considerable latitude is allowed in the choice of a second practical study. Total

exemption from examination in it will be allowed if the candidate possesses recent certificates gained in the higher grades of the local examinations in that subject.

Those holding the diploma of L. Mus. can at any time during the five years immediately following their passing that examination enter for the Mus. Bac. final examination, but they must pass the matriculation examination.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF MUSIC.

Candidates for the degree must have passed the following examinations:—

1. The Matriculation Examination. (See page 50.)
2. The First Examination in Music, at the end of the first year.
3. The Second Examination in Music, at the end of the second year.
4. The Final Examination.

The particulars of the work for each of the above examinations are as follows:—

First Examination in Music :—

(a) Advanced rudiments.
(b) Harmony in 3 and 4 parts.
(c) Counterpoint up to 3 parts.
(d) Form and analysis. Questions will be given on accent, cadence, metre, rhythm, phrasing, etc., and on form, shown in the work of the early classicists (Scarlatti, Bach, Mozart and Haydn).
(e) General outlines of musical history.
(f) Chief and second practical study, or, instead of one of these, the composition of a song (or songs) or a miniature suite for piano (or violin and piano or any other combination).

Second Examination in Music :—

(a) Harmony in not more than 4 parts.
(b) Counterpoint in not more than 4 parts.
(c) Canon in 2 parts and fugal exposition up to 4 parts.
(d) History of music from the 16th century to the present day.
(e) Form and analysis. The candidate must show an intimate knowledge of a few compositions, the names of which will be supplied on application, at least three months before the date of examination.
(f) Elementary knowledge of acoustics, or physiology of voice.
(g) Chief and second practical study, or, instead of one of these, the composition of :—(1) A movement in sonata form for pianoforte (or piano and violin, or any other combination), or (2) chorus with independent accompaniment, or (3) suite for strings.

Final Examination in Music :—

(a) Harmony up to 5 parts.
(b) Counterpoint up to 5 parts.
(c) Double counterpoint in 8ve., 10th, and 12th.
(d) Canon and fugue in 4 parts.
(e) History of music from the earliest to the present time.
(f) Form and analysis. A knowledge will be required of such works as the following:—Bach's 48 Preludes and Fugues, Beethoven's Sonatas, Schubert, Schumann and Brahms' Songs, Mendelssohn's Psalms and such Oratorios as Elijah and St. Paul. (The candidate should send in a list of works, in which he or she is prepared to be examined, a few weeks before the day of examination.)
(g) Instrumentation—a knowledge of the compass and capabilities of all instruments in the modern orchestra, and the scoring of a given passage in a given time, also the reading at sight of a short excerpt from an easy score of an early work by Mozart or Beethoven.
(h) Chief and second practical study (or in lieu of both of these a composition can be sent in by the candidate containing 4-part chorus, a solo or duet, an unaccompanied quartette and a 4-part fugue—the whole scored for stringed instruments with independent accompaniment).

Graduates (those holding the degree of Bachelor of Music) of other Universities can be admitted to an *ad eundem* degree of Bachelor of Music at this University if they are proceeding to the McGill degree of Mus. Doc. and have satisfied the University authorities in all requirements and paid the necessary fees for the same.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF MUSIC.

Bachelors of Music of McGill University, after the lapse of a period of three years from the time of taking the degree of Bachelor of Music, may proceed to the degree of Doctor of Music, the requirements for which is a composition in extended form, such as an oratorio, opera or cantata. This exercise must have as its first number an introductory orchestral movement in the usual concert-overture form, and must contain eight-part writing and fugal treatment. It must be scored for a full orchestra. This original and unaided composition, if approved of, may be publicly performed by the candidate in the University or some other fit and proper place, at the discretion of the University. In addition, an examination in the higher forms of composition shall be necessary, together with a critical knowlege of the full scores of certain prescribed works.

Full particulars with regard to degrees and diplomas in Music, as well as those relating to local examinations not included in the above, will be found in the special Music Syllabus obtainable on application to the secretary of the McGill University Conservatorium of Music.

DEPARTMENT OF PHYSICAL EDUCATION.

FOR MEN.

Medical Director of Physical Education:—F. W. Harvey, B.A., M.D.
Physical Director:—Arthur Stanley Lamb, M.D., B.P.E.

All students on entering the University are required to pass a physical examination (see page 63). By such an examination any physical defect or weakness may be discovered early, and the student will be advised with regard to treatment. For those defects amenable to treatment by exercise or other hygienic measures, individual attention will be given and the students will be advised as to what forms of exercise will be likely to prove beneficial or harmful.

Students who are not British subjects will be governed by the following regulations:—

At the time of the physical examination students entering the first year will be given a card to fill up calling for information as to the forms of physical work or exercise they have been accustomed to take. They will be asked to state also what forms of physical activities they desire to follow during the college term, whether gymnastics, military drill, or athletics, including games. A complete list of the various forms of college sports will be given, from which a choice may be made.

A classification of students will be made as follows:—

Class A.—Men eligible for all forms of physical exercise.

Class B.—Men eligible only for certain forms, *e.g.*, those who may be unfit for such strenuous games as football or water polo, but who play tennis, basket ball, and certain other games which will be indicated.

Class C.—Those not eligible for any form of competitive athletics. Many students of this class will be found, on their subsequent examination, to have made sufficient improvement for advancement into a higher grade.

Gymnastic Course.—Gymnastic classes will be held twice a week for all students who are not engaged in competitive athletics or military drill. Students participating in competitive work will not be required to attend the regular gymnastic classes during the active season for such competitions. A carefully graded and progressive course of exercises will be given to promote organic vigour, neuro-muscular control and general physical efficiency and the physical development of the student. Special attention is given to the application of exercise in cases of weakness or deformity.

The Wicksteed silver and bronze medals for physical culture (the gift of the late Dr. R. J. Wicksteed) are offered for competition to students of the graduating class and to students who have had instruction in the gymnasium for two sessions; the silver medal to the former, the bronze medal to the latter. The award of these medals is made by judges appointed by the Corporation of the University. Every competitor for the silver medal is required to lodge with the judges, before the examination, a certificate of good standing in the graduating class, signed by the Dean or Registrar of the Faculty to which he belongs, and the medal will not be awarded to any student who may fail in his examination for the degree.

STRATHCONA CERTIFICATE COURSE.

The Departments of Education (see page 121) and Physical Education offer the following course:—

FOR MEN AND WOMEN UNDERGRADUATES OF THE FOURTH YEAR.

A course of 20 lessons of 1½ hours each on the principles and practice of physical education. The course will cover elementary anatomy, physiology and hygiene, the theory of gymnastics and class teachings. Miss Cartwright, Dr. Lamb.

Students who satisfactorily complete this course are entitled to certificate "B" of the Strathcona Trust, and their work is included in the requirements of the First Class Academy Diploma of the Province of Quebec.

FOR WOMEN.

(ROYAL VICTORIA COLLEGE.)

Medical Director of Physical Education:—F. W. Harvey, B.A., M.D.

Physical Director:—Miss E. M. Cartwright, Graduate and former Assistant of the Chelsea College of Physical Education, London, England.

Classes in educational gymnastics are conducted for all undergraduates of the College and also for resident partial students, in the gymnasium of the Royal Victoria College (see page 2 7). All students on entering the University are required to pass a physical examination (see regulation on page 63) and are also required to pass satisfactory physical tests before taking part in any of the outdoor or indoor physical exercises organized by the Physical Department, whether educational, remedial or recreational.

Work in the Physical Education Department throughout the four-year course (amounting to 140 hours in all) is required of all undergraduate students.* These periods will be used for instruction in personal

*In all cases of absence the student is required to report to the Physical Director. The ordinary interpretation of the one-eighth rule concerning absences does not apply to this Department. Every student is required to wear the costume recommended by the Department.

hygiene and for educational, remedial and recreative gymnastics, according to the physical requirements of the individual. No student will be asked to do work unsuited to her physique, and students debarred from exercise of any kind will be dealt with separately and carefully advised.

Partial students are admitted to the classes in educational and recreative gymnastics on payment of special fees.

Reports of attendance in physical education will be regularly sent to the Faculty.

Strathcona Prizes.—Three first prizes of $8, $10, and $12, and three second prizes of $5, $6, $9, are open to students for competition in the second, third and fourth years respectively. Two prizes of $5 are offered for competition to the students of the first year; one for students who have taken part in educational gymnastics at school, and the other for students who have had no previous physical training.

All competitions will be held under the following regulations:—

1. Competitors will be awarded 50 per cent. of the marks on the work of the session.

2. No prize shall be awarded unless the judges consider the work up to the standard of 75 per cent.

3. The prizes shall not be awarded in the second, third and fourth years should the winner fail to obtain her full academic standing. The prizes in the first year shall not be awarded if the winners fail in more than one subject at the sessional examinations.

4. Competitors will be judged on the work taught in the Physical Education Department during the session, the Physical Director arranging all details concerning the competition. A programme of the competitions will be posted not later than March 1st.

5. Judges for these competitions shall be appointed yearly by the Corporation, on the recommendation of the Department.

STRATHCONA CERTIFICATE COURSE.

See page 270.

McGILL SCHOOL OF PHYSICAL EDUCATION.

This school was founded under the Teachers' Training Committee in June, 1912, to train teachers of physical education for school work, recreational and social work.

In 1914 a course was added in massage and remedial gymnastics to meet the growing demand for trained masseuses, especially in view of the urgent needs of returned wounded soldiers.

The courses provide a thorough all round training extending over two years, but they are independent, and for the present either may be taken separately.

COURSE 1.—EDUCATIONAL COURSE.

Practice in Teaching. Great stress is laid on the practice of teaching. Owing to exceptional facilities, every student will be given the opportunity to conduct classes, games and dances, with helpful supervision from expert teachers.

Entrance Requirements. It is highly desirable that the teachers of Physical Education shall have reached a good standard of general culture, hence the following will be required for entrance to the course:—High School Leaving Certificate, or Matriculation, or the Model Diploma of the Province of Quebec, or equivalent qualification, at the discretion of the Committee.

Medical Examination. All students will be required to pass a satisfactory physical examination before proceeding with the course.

Diploma. Examinations will be held in all regular subjects and certificates will be granted at the end of each year for work done. Fifty per cent. required to pass; 60 per cent. for second class; 75 per cent. for first class; but in all cases at least 60 per cent. must be made on teaching. The Diploma, granted on successful completion of the course, is recognized by the Protestant Board of School Commissioners of Montreal as qualifying for the salary of specialist in public schools.

COURSE II.—MASSAGE AND REMEDIAL GYMNASTICS.

(For Hospital and Private Work.)

Course II—offered Session 1914-1915 for the first time—is intended to meet the growing demand for experts in this important branch of physical work. The knowledge of massage, remedial gymnastics and the various forms of physical therapy is more and more recognized as necessary in medical and educational practice. It has proved of the utmost value in the treatment of convalescent soldiers.

The Course will be of special value to graduate nurses who wish to obtain additional qualifications, and to those engaged in physical education.

The treatment of postural and other defects of school children cannot be effectively carried out in large gymnastic classes, but should be supplied by experts who can give individual attention to such cases.

SUBJECTS.

Courses I. and II.	**Course I. only.**
Anatomy (general and applied)	Educational Gymnastics
Physiology	Games
Physiology of exercise	Dancing and Folk dancing
Hygiene (Personal, school and public)	Class management and teaching
Theory of Movement	Remedial Gymnastics
Anthropometry	History of Physical Education
Physical Diagnosis	Educational Psychology
First Aid	Psychology of Play
Heredity and Evolution	Swimming and Life-saving

Course II. only.

Theory and Practice of Massage and Medical Gymnastics
Electro-therapy, Mechano-therapy, Photo-therapy, Hydro-therapy
Elementary Educational Gymnastics

PLAYGROUND SUPERVISION.

No special course is offered, but graduates of Course I who have taken handwork and kindergarten in addition to their courses are fully equipped to undertake the supervision of playgrounds. Classes in these subjects are offered by the Teachers' Training Committee.

For full particulars of all courses see syllabus, to be obtained from the Registrar.

MILITARY TRAINING.

In view of the fact that the Federal Government has not as yet adopted any general policy with regard to military training no instruction in military science will be given at McGill University during the session 1919-1920, except perhaps in the Faculty of Applied Science, where an alternative may be allowed in the fourth year between Field Engineering, Map Reading and Field Sketching and Military Administration and Organization on the one hand and certain selected subjects in the several courses, as shown on pages 177 to 189.

CANADIAN OFFICERS' TRAINING CORPS.

(McGill University Contingent.)

In order to provide undergraduates with practical military training, a contingent of the Canadian Officers' Training Corps was organized at McGill University two years before the war began, and is still being majntained. Students are thus afforded an opportunity for preparing themselves for service as officers in the Canadian Militia. The contingent is a unit of the active militia, being governed by special regulations, under which it cannot be called out for active service as a unit.

The training is intended to bring the largest possible number of students up to the standard required for the two certificates (A and B) of proficiency. The value of these certificates lies in their being a guarantee of consecutive training for two or more years, of a nature calculated to produce good officers. If a member, who is in possession of a certificate, is recommended for a commission in the Active Militia, this certificate entitles him to rank as an officer without any further qualification, and also to certain other advantages.

To obtain a Certificate (A or B) a member must complete two years *efficient* service in the corps, and pass the written and oral examinations prescribed for the respective certificates. To be efficient in a given year (1st August to 31st July), a member must have attended 40 parades if in his first year of service, or 25 parades if in a subsequent year, and must have completed the prescribed course of musketry. The time required is about two hours per week each session.

Each member, upon joining the contingent, will be required to deposit the sum of $5.00 with the Adjutant; for which a receipt will be given. This money will be refunded if the member becomes efficient; otherwise, it will go into the funds of the contingent.

The training in the corps is of such a nature that all students are recommended to join. Enlistment is, however, purely voluntary.

THE GRADUATE SCHOOL.

In the Graduate School are enrolled all the graduate students in the University who are following advanced courses of study in subjects which in the undergraduate work fall within the scope of the Faculties of Arts, Law, and Applied Science.

The Faculty of the Graduate School consists of the professors of the Faculties of Arts, Law, and Applied Science, but the initiative and administration of the School is placed in the hands of a Committee selected mainly from these Faculties and known as the Committee on Graduate Studies. The Chairman of this Committee is the official head of the Graduate School. The advanced courses of study offered in the Graduate School lead to the degrees of Master of Arts, Master of Science, Master of Laws, and Doctor of Philosophy.

Instruction for students of the Graduate School is provided in the following departments of study which at present rank as "Subjects" :

Philosophy, including Psychology.
History.
Economics and Political Science.
Greek Language and Literature (including Grecian History).
Latin Language and Literature (including Roman History).
French Language and Literature.
German Language and Literature.
English Language and Literature
Semitic Studies.
Archæology.
Comparative Philology.
Education.
Mathematics.
Physics.
Chemistry.
Botany.
Zoology.
Geology and Mineralogy.
Thermodynamics and Theory of Heat Engines.
Theory of Elasticity, Strength of Materials and Theory of Structures.
Hydrodynamics and Hydraulics.
Applied Electricity.
Theory of Machines and Machine Design.
Metallurgy.
Mining.
Law.

The requirements for the several degrees in course are as follows:

DEGREE OF MASTER OF ARTS.

1. Candidates must hold the degree of B.A. or B.Sc. (in Arts) from McGill University, or its equivalent.

2. Candidates must have taken
   (*a*) One year of resident graduate study at McGill University; or
   (*b*) If graduates of McGill University, two or more years of private work; the amount of such work required may be stated to be the equivalent of one year of academic study.

3. One, two or three subjects may be taken.

4. One of these subjects shall be designated as the major subject and special attention shall be devoted to it. It must be a subject which the student has already studied in his undergraduate course, and the work required in it will represent an attainment in knowledge far in advance of that required for the B.A. degree. The minor subject, or subjects, may be selected from those of the undergraduate course of the third or fourth year which have not already been taken by the candidate. Not more than one-third of the candidate's time for the year shall be devoted to these subjects. The student shall pass an examination in each of the subjects of his course.

In the case of students of first rank honour standing in mathematics and physics, if the major work is to be in physics, exemption may be granted from part of the required attendance on lecture courses, on the recommendation of the Head of the Department in physics and subject to the approval of the Committee on Graduate Studies.

Candidates holding the ordinary B.A. degree must have taken all the ordinary undergraduate courses, or their equivalents, in the subjects which they select as their major.

5. The student shall also present a thesis on some topic connected with his major subject. The title of his thesis must have been previously submitted to the Committee on Graduate Studies and the Head of the Department concerned for their approval. The thesis must show evidence of distinct ability in dealing with the subject selected, and must also display good literary style.

6. Graduates possessing a Bachelor's degree, who act as demonstrators or tutors in the University for the entire session, may proceed to the degree of M.A., and, in so doing, may, at the discretion of the Department with which they are connected, and the Committee on Graduate Studies, omit a portion of the course of study. They shall, however, be called upon to pass an examination on the course of study which they have followed, and shall in all cases submit the thesis prescribed for that degree. If, however, they desire this year's work to count as one of the three years of study required for the Ph.D. degree, they must make their course of study conform to the Ph.D. requirements.

N.B.—The first year's course of study for the Ph.D. degree will cover the requirements of the M.A. course; but if such a course of study be followed, a thesis must be submitted and approved before the degree of M.A. is conferred. If, however, the student continues his course of study and takes the degree of Ph.D., the degree of M.A. will be conferred with the degree of Ph.D., in which case no special thesis will be required for the former.

DEGREE OF MASTER OF SCIENCE.

1. Candidates must hold the degree of B.A. or B.Sc. from McGill University, or its equivalent.

2. Candidates must have taken
   (*a*) One year of resident graduate study at McGill University; or
   (*b*) If graduates of McGill University, two or more years of private work; the amount of such work required may be stated to be the equivalent of one year of academic study.

3. The course of study followed by the candidate shall be of an advanced character, being the equivalent of that required for the degree of M.A., and shall lie in the domain of pure or applied science. It shall be selected from *one* of the last thirteen subjects in the list given above. Geodesy and ore dressing also constitute subjects in the case of this degree. This course of study must have been previously submitted to the Head of the Department and to the Committee on Graduate Studies and have received their approval.

In the case of students of first rank honour standing in mathematics and physics, if the major work is to be in physics, exemption may be granted from part of the required attendance on lecture courses, on the recommendation of the Head of the Department in physics and subject to the approval of the Committee on Graduate Studies.

4. The candidate shall also present a thesis on some subject connected with his course of study. The title of this thesis must have been previously submitted to the Head of the Department and to the Committee on Graduate Studies and have received their approval. This thesis must show evidence of distinct ability in dealing with the subjects selected and must also display good literary style. It may deal with some special topic, but the course of study followed by the student must cover a much wider field.

5. Graduates possessing a Bachelor's degree who act as demonstrators or tutors in the University for at least one entire session, may proceed to the degree of M.Sc., and, on so doing, may, at the discretion of the Committee on Graduate Studies, omit a portion of the course of study usually required. They shall, however, be called upon to pass an examination on the course of study which they have followed, and shall in all cases submit the thesis prescribed for the degree.

DEGREE OF MASTER OF LAWS LL.M.

Candidates must (1) hold the degree of B.C.L. or LL.B., from McGill University, or its equivalent, or be graduates of an approved law school; (2) have pursued for one year a course of resident study at McGill University and must have submitted a thesis of conspicuous merit upon a subject

previously approved by the Faculty of Law and by the Committee on Graduate Studies, and must have passed such examination as may be prescribed.

Applications to be admitted to study under this section must be made to the Committee on Graduate Studies, with particulars of the proposed thesis, not later than the 1st of February of the year in which the candidate proposes to enter upon his course of study. A printed or typewritten copy of the thesis must be delivered to the Dean of the Faculty of Law for transmission to the Committee on Graduate Studies not later than the 1st of March of the year in which the candidate proposes to proceed to the degree.

DEGREE OF DOCTOR OF PHILOSOPHY.

1. The candidate for the degree of Doctor of Philosophy must hold the degree of B.A. or B.Sc. from McGill University, or its equivalent.

2. He must have followed a course of at least three years' resident graduate study.

3. He must select one major subject and one minor subject. The minor subject selected must be related to his chief line of work. This minor subject shall have devoted to it about one-quarter of the instruction given during the entire course.

4. The candidate must satisfy the Committee that he has a reading knowledge of both French and German before he will be permitted to enter upon the course of the second year.

5. The examination on the major subjects shall cover not merely the formal courses of instruction which have been taken, but the candidate must show that he possesses a good general knowledge of the whole science or branch of learning which he has selected as his major subject. A similar general, though less detailed, knowledge shall be required in the case of the minor subject.

6. The candidate must also prepare a thesis which must display original scholarship or show marked ability to conduct research. If the thesis be accepted, two hundred printed copies of it must be deposited with the University Librarian before the candidate will receive his diploma.

The University exacts a very high standard in the case of this degree, and at least three years of study are therefore demanded.

A three years' course leading to the degree of Doctor of Philosophy is offered in the following subjects taken as majors:—

Botany.
French.
Philosophy.
Physics.
Chemistry.
Semitic Studies.

Students desiring to proceed to the degree of Doctor of Philosophy in subjects other than those mentioned above may communicate with

the Chairman of the Committee on Graduate Studies, to whom also application should be made by all students desiring to follow courses of study in the Graduate School.

DEGREE OF DOCTOR OF CIVIL LAW.

Any person who has graduated as B.C.L., or as LL.M., from McGill University may after five years from such graduation proceed to the degree of Doctor of Civil Law, provided that he shall have written a thesis on a subject previously approved by the Faculty of Law and by the Committee on Graduate Studies, and that such thesis shall have been adjudged by the Faculty of Law and by the Committee on Graduate Studies to be a valuable contribution to legal science. The candidate may, instead of a thesis, submit to the Committee on Graduate Studies a published book or books dealing in a scientific way with some branch or branches of law, and in that case no previous approval is required. Three printed or typewritten copies of the thesis or three copies of the book or books, as the case may be, must be delivered to the Dean of the Faculty of Law for transmission to the Committee on Graduate Studies not later than the 1st of February of the year in which the candidate proposes to proceed to the degree.

THESES.

Owing to the fact that in future all theses submitted by successful candidates for higher degrees will be bound and placed in the Redpath Library, candidates for such degrees are advised that the Committee on Graduate Studies will henceforth require all theses to be prepared in a uniform manner and in accordance with the following specifications:—

1st.—The paper is to be of uniform size, about 8¼x 10 inches, and of substantial quality.

2nd.—The left-hand margin is to have a uniform width of about 1½ inches.

3rd.—All these should be typewritten, if possible.

4th.—No binding is to be employed, but the loose sheets will be placed in a manilla envelope in the order of their pagination.

All theses for 1919-1920 must be in the hands of the Chairman of the Committee on Graduate Studies on or before April 16th, 1920. No thesis received after this date will be accepted.

REGISTRATION.

Application forms, with an outline of the course to be followed, must be filed with the Secretary, for the approval of the Committee, before the 10th of October of each year.

Students whose course extends over more than one year must register at the commencement of each year of their course.

Application forms and registration cards may be obtained from the Secretary of the Committee.

THE UNIVERSITY LIBRARY.

C. H. GOULD, B A., Librarian.

The University Library is under the general management of a Committee of Corporation, consisting of the Principal, Chairman; the Librarian, Secretary; two members of the Board of Governors, one Representative Fellow, appointed by Corporation; two representatives of the Faculty of Arts, elected by the Faculty; one representative of each of the Faculties of Applied Science, Law and Medicine, elected by their respective Faculties; and four other members appointed by Corporation.

The several libraries of the University now contain 165,657 volumes, over 25,000 pamphlets, considerable collections of maps and photographs, and a number of the rarer and more costly monographs and serials which are indispensable for purposes of research; there being now on the shelves over 300 complete files of periodicals and publications of various literary and scientific societies.

Among the special collections possessed by the Library may be mentioned the Mendelssohn Choir Memorial Collection of Works on Music, the T. D. King Collection of Shakespeariana, the Redpath Historical Collection, and the Collection of Canadiana. The nucleus of the latter is formed by the choice library of the late Mr. Frederick Griffin, which he bequeathed to the University about forty years ago. It has been growing ever since, and includes, at the present time, besides numerous manuscripts, an interesting collection of Canadian portraits and autographs. The Canadiana have been further enriched by the recent gift of over 270 volumes and 50 pamphlets from the library of the late Mr. William McLennan, presented in his memory by his children.

The Redpath Historical Collection was begun by the late Mr. Peter Redpath soon after he became a Governor of the University. It received substantial yearly additions from him up to the year of his death, after which it was steadily augmented during the remainder of her life by his widow. It is now large and valuable, and affords excellent opportunities for the study of history. Its most striking feature—a series of political, religious and social tracts, for which the first selections were made by the late Professor Henry Morley—was greatly enriched by the late Mrs. Redpath, and at present comprises about 10,000 brochures, dating from 1600 A.D. to the end of the nineteenth century.

A special Architectural collection, to be known as the "Gordon Home Blackader Memorial Library," has been established in honour of Captain Gordon Home Blackader, B.Arch. (McGill), who was wounded near Ypres on June 2nd, 1916, and died in London on August 20th of the same year.

The Medical Library, dirctly controlled by the Faculty of Medicine, is the largest of the departmental libraries, and is one of the most complete collections of its kind in the Dominion.

Current periodicals, with Transactions and other Society publications to the number of about 400 in the aggregate, are regularly received by the Library.

Founded in 1900, as a memorial to the late Mr. Hugh McLennan from his children, the Travelling Libraries of McGill University were endowed in 1911, by their founders. These libraries contain, each, from thirty to forty carefully selected volumes; and are sent, on application, and on payment of a nominal fee of $3.00, to schools, to country libraries, to reading clubs, and to small communities which possess no public library. Regulations and full particulars may be obtained from the Librarian of the University.

Although the Library is maintained primarily for members of the University, the Corporation has provided for admission, upon certain conditions, of such persons as may be approved by the Library Committee. It is the desire of the Committee to make the Library as useful to the entire community as is consistent with the safety of the books and the general interests of the University.

EXTRACTS FROM THE LIBRARY REGULATIONS.

1. The Library is closed on Sundays, and on certain other holidays, as noted in the *Calendar of Meetings*. With a few exceptions, which are posted in the Library at the appropriate time, the Library is open as follows :—

(a) During the session, from 9 a.m. till 6.30 p.m. and from 7.30 till 10.30 p.m. On Saturdays from 9 a.m. till 5 p.m.

(b) During vacation from 9 a.m. till 5 p.m. On Saturdays, from 9 a.m. till 1 p.m.

2. Students in the Faculties of Arts, Law, and Applied Science are entitled to read in the Library, and may borrow books (subject to the regulations) to the number of three volumes at one time.

3. Students in the Faculty of Medicine, who have paid the Library fee to the Bursar, may read in the Library, and on depositing the sum of $5 with the Bursar, may borrow books on the same conditions as students in other faculties.

4. Graduates in any of the faculties, on making a deposit of $5, are entitled to the use of the Library, subject to the same rules and conditions as students in Arts, Law, or Applied Science.

5. Books may be taken from the Library only after they have been charged at the delivery desk; borrowers who cannot attend personally must sign and date an order, giving the titles of the books desired..

6. Books shelved in the reading-rooms or seminary-rooms must not be taken from the rooms to which they have been assigned; and, after they have been used, they must be returned promptly by readers to their proper places upon the shelves.

7. Before leaving the Library, readers must return to the attendant at the delivery desk books which they have drawn from the stack for use in the reading-room.

8. All persons using books remain responsible for them so long as the books are charged to them, and borrowers returning books must see that their receipt is properly cancelled.

9. Writing or making any mark upon any book belonging to the Library is unconditionally forbidden. Any person found guilty of wilfully damaging any book in any way shall be excluded from the Library, and shall be debarred from the use thereof for such time as the Library Committee may determine.

10. Damage to or loss of any books, maps, or plates, and injury of library fixtures, must be made good to the satisfaction of the Librarian and the Library Committee.

Damage, loss or injury, when the responsibility cannot be traced, will be made good out of the caution money deposited by the students with the Bursar.

11. Should any borrower fail to return a book upon the date when its return is due, he may be notified by postal card, and be requested to return the book. If the time has not been extended, or the book returned, after a further delay of at most three days, the book may be sent for by special messenger, at the borrower's expense, or may be replaced, and paid for, in the case of a student, out of the caution monies of such student; in the case of graduates or other borrowers, out of their library deposits.

12. Before the close of the session, students in their final year must return uninjured, or replace to the satisfaction of the Librarian, all books which they have borrowed.

13. Silence must be strictly observed in the Library.

14. Infringement of any of the rules of the Library will subject the offender to a suspension of his privileges, or to such other penalty as the nature of the case may require.

THE ROYAL VICTORIA COLLEGE.

Founded and Endowed by the late Rt. Hon. Baron Strathcona and Mount Royal.

FOUNDATION AND HISTORY.

The College was opened September 4th, 1899.

It is the outgrowth of plans conceived during the early years of his Principalship by the late Sir William Dawson, which resulted in the establishment of the Ladies' Educational Association. Under the auspices of the Association, courses of lectures delivered chiefly by Professors of McGill University, were offered to women from 1870 until 1884, thus placing within their reach, to some extent at least, the advantages of a Collegiate and University education.

In 1884, during the principalship of the late Sir William Dawson, the late Lord Strathcona, then Mr. Donald A. Smith, gave a sum of $50,000, and, in 1887, a further sum of $70,000, to found the Donalda Endowment for the higher education of women, such education to be conducted in the buildings of McGill College, as a distinct course in the Faculty of Arts, with the understanding that as soon as practicable the classes were to be created into a separate college of McGill University, with a building separate from that of McGill College. Under the terms of the Donalda Endowment it was provided that degrees in the Faculty of Arts should be granted to women practically on the same conditions as to men, and that the examinations for such degrees, for classing, honours, prizes and medals should be identical with those for men.

As a result of this generous gift and in accordance with the conditions attached, courses of instruction, identical in subject and in standard with those of the Faculty of Arts, were established for women in 1884. These courses were given in the Arts Building, some of the work of the third and fourth years and of the Honour Courses being conducted in joint classes.

The first graduating class of eight women was presented for the degree of Bachelor of Arts in 1888.

The ultimate object of Lord Strathcona had been the provision of a residential college, and this was realized when the Royal Victoria College was opened in 1899, and formally inaugurated by their Majesties the King and Queen (then Duke and Duchess of York) in 1901.

The College building, surrounded by garden and tennis courts, was erected at a cost of about $400,000 at the head of Union Avenue, upon land adjacent to the University Campus. Its beautiful and dignified exterior was designed in consistency with a careful and generous internal provision

of a comfortable and gracious place of study and dwelling for students and for staff. A Warden and Resident Staff were appointed. With these new and great advantages the instruction provided by the original endowment has been maintained as hitherto, except that the separate classes are held mainly in the College building. Women have continued to prepare for degrees in Arts, including pure science. Through the wisdom of Lord Strathcona, provision was also made for the study of music. Since, however, the establishment of music as a separate department of the University in the Conservatorium of Music, independent instruction in music in the College has ceased, but it still maintains a resident lecturer in this subject, who is also Vice-Director of the Conservatorium. The interest of College students in music is thereby served and provided for. Women students resident in the Royal Victoria College may take degree courses in music at the Conservatorium.

THE COLLEGE BUILDING.

The building provides an academic, administrative and recreational centre for resident and non-resident students. It is situated on Sherbrooke Street in close proximity to the University buildings, and within easy reach of Mount Royal Park. The building is fireproof, and much thought and artistic care have been given to furnishing and decoration.

On the ground floor are the offices of the Administration, including the rooms of the Warden and Secretary, the faculty room, the students' common room, a spacious dining hall, and three lecture rooms. On the first floor are other lecture rooms, the library, reading room, and a handsome assembly hall, which is used for convocation, Conservatorium concerts, and other University purposes. This hall is sometimes lent for purposes that are in harmony with the objects of the College. The gallery, which is reserved exclusively for the use of College students on such occasions, affords the latter many opportunities of educational value. The second and third floors and a small part of the first floor are occupied by the rooms of the Resident Staff and students. Each student has a separate study-bedroom. If accommodation permits, a student may be assigned two rooms, a study and a bedroom. The rooms are completely furnished, and no article of furniture need be brought by the students.

A large gymnasium is provided, fully-equipped with modern requirements. In connection with the gymnasium are bath-rooms and dressing-rooms.

Resident students of music have the use of pianos in two practising ooms and at certain hours in other parts of the building.

The lawn behind the College building provides lawn tennis courts in the summer and a skating rink in the winter. Subject to regulations, the students have the privilege of using the University grounds. Each student paying the Grounds Fee receives a ticket giving admission to the Campus skating rink during certain afternoon hours daily except Saturdays.

ADMISSION AND INSTRUCTION.

The College being a college of McGill University and its students being registered in the Faculty of Arts, they are required to comply with the regulations concerning discipline and instruction, made by the University and Faculty, and, in addition, with such regulations as may be made for the Royal Victoria College.

Undergraduates are required to pass the Matriculation Examination of the University, or an equivalent examination (see pages 43 to 60) and can proceed to the degrees of B.A. and B.Sc. They are required to wear academic dress. Partial students, in order to obtain admission, must pass the matriculation examination in the subject, or subjects, which they wish to take, or, failing this, must be able to satisfy the Head of the Department concerned that they are qualified to proceed with the course.

Students are required to enter on the roll book of the College their names, home addresses, and addresses in Montreal. All students entering the University for the first time are required, according to municipal regulations, to present a certificate or other satisfactory evidence of successful vaccination. No student who has an infectious illness or who comes from a house in which there has been an infectious illness within a month, shall enter or return to the College without giving notice and obtaining the consent of the Warden. The health of the resident students is in charge of a competent physician, practising in Montreal, who may be consulted, free of charge, by arrangement with the Warden. Every student applying for admission to residence is required to fill in an entrance form and to forward a medical certificate on a form provided by the College.

Instruction is given by professors and lecturers of the University and lecturers and tutors of the Royal Victoria College, who are also members of the various teaching departments of the Faculty of Arts. Graduate students can proceed to the degrees of M.A., M.Sc. and Ph.D.

Lectures are given in the College or in the University buildings, practical instruction in science being given in the University laboratories. Students are assisted in their studies by the resident staff.

Students of the College have the use of the University Library containing 165,657 volumes. There is also a College Library comprising works of general literature and the chief stated books required for the University curricula, the Department of Modern Languages being especially well represented. The College Library and Reading Room are open to resident students from 9 a.m. to 11 p.m. and to non-resident students from 9 a.m. to 6 p.m. (on Saturdays from 9 a.m. to 1 p.m.).

The Peter Redpath Museum, containing large collections in mineralogy, palæontology, zoology, botany, archaeology, and ethnology, is open to students of the College.

The Warden's business hours are 10 a.m. to 1 p.m.; at other times, by special appointment. She will be glad to meet all students before the opening of the session and to discuss their plan of work then or at any other time during the session.

Applications for admission or for further particulars should be addressed to the Warden, Royal Victoria College, Montreal.

EXHIBITIONS AND SCHOLARSHIPS.

For a statement of the exhibitions and scholarships open to women students of the University, see page 74.

In addition to these, and further to encourage residence within the College walls of students who might otherwise arrange to board in the city, the Warden and Staff are empowered to make nominations in any of the four college years to not more than three additional exhibitions of the value of $100.00 each.

TUITION FEES.

Students (graduate, undergraduate or partial, resident and non-resident) pay the same fees as are charged in the Faculty of Arts. For undergraduate students the fee is $58 (this includes fees for laboratory, library, gymnasium and graduation). For further information, see page 84. Every student pays an Athletics or Grounds fee of $3.00, and undergraduate students the Royal Victoria College Undergraduate Society fee of $2.50. All fees are payable to the Bursar, McGill University, on or before October 10th.

BOARD AND RESIDENCE.

Residence in the College is open to graduate students, undergraduates, conditioned undergraduates, and, in exceptional circumstances, to partial students. *Application for residence should be made early as accommodation in the College is limited.* The charge for board and residence, in addition to the sessional fee for tuition, is $340 ($140 for room, $200 for board). This may be paid in two equal instalments of $170.00 each in October and January. An additional charge, varying from $50 to $100, is made for the use of a private sitting-room. Room rent includes all expenses of heat and light (not other electrical attachments, for which fees will be charged). These charges cover the University session from about September 28th to the day after Convocation.

Students of music or others who remain in College until a later date for purposes of instruction, school practice, or examination, are charged an additional fee of $1.50 a day. No additional fee is charged to students returning earlier than September 28th for scholarship, supplemental, or matriculation examinations. With the permission of the Warden, students may remain in residence during the Christmas vacation. They will be required to pay a fee of $1.50 per diem for board and residence.

The charges for tuition and room rent are not subject to remission or reduction under any circumstances. In case of prolonged illness and absence from College for a period of six weeks or more, a proportionate reduction, however, is made in the charge for board.

All fees are payable to the Bursar, McGill University, on or before October 10th. *Notice of withdrawal should be given at the close of the session, or not later than September 1st.*

PHYSICAL EDUCATION.

The Department is in charge of the Medical Director of Physical Education of McGill, and a graduate of a Physical Education College.

Every student on entering the College is required to pass a physical examination.

The physical education offered to undergraduate students includes educational, remedial and recreative gymnastics.

The educational gymnastics are based on anatomical and physiological laws; the exercises aim at producing the highest degree of health in each individual, and thus contribute to mental as well as to physical efficiency. The course of exercises, which is progressive throughout each session, encourages the harmonious development of the nervous and muscular system, and provides a remedy for incorrect habits of sitting, standing and walking. Special attention is given to the development of the chest, since a good lung capacity is the foundation of a really healthy constitution. A remedial gymnastic course is prescribed for undergraduate students with spinal curvature, or who are physically unfit for ordinary class work.

Work in the Physical Education Department, amounting to 140 hours during the four years' course, is required of all undergraduate students. The periods are used for instruction in personal hygiene and for educational, remedial and recreative gymnastics, according to the physical requirements of the individual. Attention is given inthe senior years to the subject of health problems. No student is asked to do work unsuited to her physique and students debarred from exercise of any kind are dealt with separately and carefully advised. Reports of attendance in physical education are regularly sent to the Faculty.*

The Physical Director arranges all regulations regarding necessary attendance and the substituting of recreative gymnastics for educational.

Recreative gymnastics, in the form of basketball, tennis, ice-hockey, fancy skating and athletic sports, are organized by the Athletic Association, under the supervision of the Department of Physical Education. All students are examined by the Medical and Physical Directors, and are required to pass satisfactory physical tests before taking part in any of these activities.

Partial students in residence are also required to attend educational gymnastic classes. Educational and recreative gymnastics are open to all partial students on payment of a fee of $5.00 for a class of two periods a week.

Strathcona Prizes are offered in this Department under the conditions mentioned on page 270.

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*In all cases of absence the student is required to report to the Physical Director. The ordinary interpretation of the one-eighth rule concerning absences does not apply in this Department. Every student is required to wear the costume recommended by the Department.

A course of instruction, theoretical and practical, is offered to undergraduates of the fourth year, who are preparing for the Academy Diploma, attendance being required by the Department of Education as follows (see page 146):—

A course of 20 lessons of 1½ hours each on the principles and practice of physical education. The course will cover elementary anatomy, physiology and hygiene, the theory of gymnastics and class teaching.

Students who satisfactorily complete this course are entitled to certificate "B" of the Strathcona Trust, and their work is included in the requirements for the First Class Academy Diploma of the Province of Quebec.

MUSIC

Students taking courses in music leading to the degree or diploma are eligible for residence in the College.

Instruction in music is offered at the McGill Conservatorium of Music —Director Dr. H. C. Perrin; Vice-Director, Miss Clara Lichtenstein, Resident Lecturer in the Royal Victoria College. Students may prepare for the degree examinations in music of the University, or for the Diploma of Licentiate in Music.

For information regarding courses in music, see page 266, and also the separate syllabus issued by the Conservatorium of Music.

COLLEGE SOCIETIES.

The students maintain the following societies:—The Undergraduates' Society, the Athletic Society, the Delta Sigma Literary and Debating Society, La Société Française, the Young Women's Christian Society.

MACDONALD COLLEGE.

FOUNDATION AND PURPOSE.

Macdonald College, which is incorporated with McGill University, was founded, erected, equipped and endowed by the late Sir William C. Macdonald for the following among other purposes:—

(1) For the advancement of education; for the carrying on of research work and investigation and the dissemination of knowledge; all with particular regard to the interests and needs of the population in rural districts.

(2) To provide suitable and effective training for teachers, and especially for those whose work will directly affect the education in schools in rural districts.

SITUATION AND EXTENT.

The College occupies a beautiful site, overlooking the Ottawa River at Ste. Anne de Bellevue, twenty miles west of Montreal. The main lines of the Grand Trunk and the Canadian Pacific railways pass through the property, and the stations of both railways are within its boundaries.

The College property comprises 786 acres, and has been arranged into four main areas, *viz.*: (1) the campus, with lawn, school garden, and recreation fields for men and women; (2) experimental grounds, with plots for illustration and research in grains, grasses, and other farm crops; (3) the horticultural and poultry departments; and (4) the stock farm.

THE GENERAL ORGANIZATION.

The College is divided into three schools.

(1) **The School of Agriculture,** which aims to provide a theoretical and practical training in the several branches of agriculture.

(2) **The School for Teachers,** which offers a comprehensive and thoroughly practical training in the art and science of teaching.

(3) **The School of Household Science,** in which young women receive training which will make for the improvement and greater enjoyment of home life and instructs them in professional work in household and institute superintendence and management.

ENTRANCE REQUIREMENTS.

School of Agriculture.

All candidates for admission:—

1. Must have entered upon their eighteenth year;
2. Must produce satisfactory evidence as to moral character, also medical certificate of physical health, including successful vaccination within the six years preceding date of entrance; and

3. Must produce evidence of having worked for a season (seed time to harvest) on a farm, affording a practical knowledge of ordinary farm operations. When it is thought necessary, this knowledge will be tested by a practical examination at entrance or any subsequent date.

All candidates for the one and two-year courses will be required to read and write the English language acceptably, to be proficient in the use of elementary mathematics, and to be acquainted with history and geography, especially of Canada.

A student who applies for admission to the courses leading to a degree will be required:—

(a) To pass, before entrance, an examination in English composition and dictation, English grammar, history and geography, arithmetic and nature study and elementary agriculture.

(b) Before being allowed to proceed with the work of the third year, to have obtained 60 per cent. of the marks in English and 50 per cent. in general proficiency in the examination of the work of the two-year course, and to be granted the permission of the Faculty;

or

(c) To have passed an examination* in the following subjects, up to the requirements for entrance to the other Faculties of McGill University—(1) English, (2) history and geography, (3) Latin or French or German, (4) elementary mathematics, (5) nature study and elementary agriculture, (6) any one of the following: botany, chemistry, physics, zoology.

(d) To have passed an examination in the work of the two-year course, and to have obtained the permission of the Faculty.

School for Teachers.

Teachers to be trained for the schools under the control of the Protestant Committee of the Council of Public Instruction for the Province of Quebec will be admitted under conditions prescribed by that body, particulars concerning which are given in detail in the Announcement of Macdonald College.

School of Household Science.

All candidates for admission:—

1. (a) To the homekeepers' course and short course, must have entered their eighteenth year; and
   (b) To the course in institution administration, must have entered their twenty-third year.

2. Must produce satisfactory evidence as to moral character; also medical certificate of health, including successful vaccination within the six years preceding date of entrance.

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* Certificates of having passed an equivalent examination will be accepted.

3. Must be able to read and write the English language acceptably and be proficient in the use of elementary mathematics. Candidates for the course in institution administration will be submitted to an examination in the above subjects the day after entrance.

LIVING EXPENSES.

The charges for board and lodging are as follows:—

For each occupant of a double room with single beds, per week..... $6.00

The above charges must be paid strictly in advance, and may be for the whole term, or for four weeks at a time.

Caution Money.—Every student must also, at the time of entrance, make a cash deposit of $5.00 with the Bursar of the College, to cover fines, breakages, etc.; and as soon as any student's deposit is exhausted he or she will be required forthwith to make an additional deposit of the same amount.

FEES

In the School for Teachers, tuition is free to residents of Quebec.

In the School of Agriculture, tuition is free to students belonging to the farming community of the Province of Quebec in the first two years. For other residents of Canada the fee is $50.00, and for students outside of Canada $100.00.

In the School of Household Science, tuition is free for students belonging to the farming community of the Province of Quebec in the one and two-year courses; for other residents of Canada the fee is $75.00 and for students outside of Canada $100.00 per session.

PAYMENTS AT ENTRANCE.

	Tuition, per Session	Laboratory Fee	Caution Money Deposit	4 Weeks Board in Advance*	Doctor's Fee	Laundry Fee	Total
SCHOOL OF AGRICULTURE:—							
First and Second Years:							
Students belonging to the farming community of the Province of Quebec	Free	$5.00	$5.00	$24.00	$3.00	...	$37.00
Other residents of Canada	$50.00	5.00	5.00	24.00	3.00	...	87.00
Students from outside Canada	100.00	5.00	5.00	24.00	3.00	...	137.00
Third and Fourth Years:							
Students belonging to the farming community of the Province of Quebec	50.00	15.00	5.00	24.00	3.00	...	97.00
Other residents of Canada	50.00	15.00	5.00	24.00	3.00	...	97.00
Students from outside Canada	100.00	15.00	5.00	24.00	3.00	...	147.00
SCHOOL FOR TEACHERS:—							
Model School and Kindergarten Classes	Free	5.00	5.00	24.00	3.00	$1.00	38.00
Elementary Classes	Free	2.00	5.00	24.00	2.00	1.00	34.00
SCHOOL OF HOUSEHOLD SCIENCE:—							
Homemaker and Institution Administration Courses:							
Students belonging to the farming community of the Province of Quebec	Free	10.00	5.00	24.00	3.00	1.00	43.00
Other residents of Canada	75.00	10.00	5.00	24.00	3.00	1.00	118.00
Students from outside Canada	100.00	10.00	5.00	24.00	3.00	1.00	143.00
Short Courses (per course):							
Students belonging to the farming community of the Province of Quebec	Free	5.00	5.00	24.00	2.00	1.00	37.00
Other residents of Canada	25.00	5.00	5.00	24.00	2.00	1.00	62.00
Students from outside Canada	25.00	5.00	5.00	24.00	2.00	1.00	62.00

* Occupants of single rooms are charged 50 cents per week extra. Students in Agriculture from the Province of Quebec receive a grant from the Provincial Government of $7.00 per month of attendance on account of board. See next page.

THE B.S.A. DEGREE.

Students who shall have completed the regular course of study in Agriculture, as laid down in the Announcement of the College, shall have passed the prescribed examinations for graduation, and shall have performed such exercises as may be prescribed to that end—the whole to the satisfaction of the Faculty of Agriculture— shall be entitled to the degree of Bachelor of Science in Agriculture, and the degree, when abbreviated, shall be designated by the letters B.S.A.

DEGREE IN HOUSEHOLD SCIENCE.

Students who shall have completed the regular course of study of the first two years in the Faculty of Arts, and shall have passed the prescribed examinations during the course and thereafter shall have completed a special course of study for two years at Macdonald College, shall have passed the prescribed examinations during the said course and also the special examinations for graduation; and shall have performed such exercises as may be appointed to that end, the whole to the satisfaction of the Teaching Staff of Macdonald College, and also of any other examiners whom the Corporation may associate with the said staff shall be entitled to the Degree of Bachelor of Household Science.

COLLEGE ANNOUNCEMENT.

Full details as to the courses, etc., will be found in the Announcement of Macdonald College, which will be sent, on application to the Principal, Macdonald College, Que.

PROVINCIAL GOVERNMENT GRANTS TO STUDENTS FROM THE PROVINCE OF QUEBEC.

(1) *School of Agriculture.*

The Department of Agriculture of the Province of Quebec grants to each student who belongs to the Province of Quebec $7.00 per month of attendance employed in studying according to the time tables in the School of Agriculture, Macdonald College. This amount will be placed to the credit of such students by the College Bursar and will be applied on account of board and lodging.

(2) *School of Household Science.*

The Provincial Government grants bursaries of $20.00 to $50.00 each to Quebec students from the farming community in the junior and senior years of the School of Household Science.

THE UNIVERSITY BUILDINGS.

The Centre Building.—This is the oldest building of the group. It contains the lecture rooms of the Faculty of Arts, as well as the botanical and zoological laboratories and the offices of the administration.

The Conservatorium of Music is situated at the corner of University and Sherbrooke Streets, adjoining the University grounds. On the ground floor are the offices of the Director and of the Secretary, the library and a concert hall where recitals by the staff and students are given during the session and where orchestral and choral practices are held (the more important concerts take place in the large assembly hall of the Royal Victoria College). The second and third floors contain a number of studios, where lessons are given by the various members of the staff, as well as a room for lectures in theory and history of music, sight-singing, etc. In the basement are several practice rooms.

The New Medical Building.—This building, erected at a cost of over $600,000, stands at the corner of Pine Avenue and University Street. Of the central part of the building, the greater portion is set aside for the accommodation of the library, the whole of the front of the second and third floors and a portion of the ground floor being so used. On the third floor is a large students' reading room 76 x 24 feet, exceptionally well lighted and capable of accommodating 100 readers. On this floor also is the staff journal room and the private offices of the librarian. The second floor is occupied by the stack room, with accommodation for sixty thousand volumes, also by individual research and reading rooms. A portion of the ground floor is set aside for storage. Besides the library, the central portion of the building contains also three lecture rooms, the private museum and offices of the professor of anatomy and the administration office, research and preparation rooms of the museum staffs. To the rear of the central building is the museum, probably the most complete structure of its kind in connection with a medical school on this continent. It is built in the form of a cross, three storeys high, splendidly lighted by ample window space on three sides and by a large central light well. Each floor is furnished with free stacks and wall cases made of steel and plate glass thoroughly dust-proof. The anatomical collections are placed on the third floor, while the first and second floors are devoted to pathology. In both the anatomical and pathological sections of the museum the specimens have been prepared and classified with a view to their being made use of in the teaching of these important subjects. The east wing gives accommodation for the Departments of Anatomy, Pathology and Bacteriology, and the Dental Department, the Faculty rooms and administration offices, the mortuary and preparation room for dissecting material, as well as ample

space for students' lockers and lavatories, and a large well-lighted students' reading and smoking room. On the ground floor of this wing will be found the mortuary, in which there is provision for the storage of 80 subjects, and leading from this the preparation room. On this floor also is the large locker room, containing 400 steel lockers, the students' lavatory and the students' reading and smoking room, the latter being provided with newspapers and magazines and being under the control of the students themselves. On the first floor is the Faculty room and a series of rooms for administrative work. The northern half of this floor is occupied by the Dental Department, comprising offices, lecture rooms and modern, well-equipped laboratories. The second floor is wholly occupied by the Department of Pathology and Bacteriology. In the southern half is the Professor's private laboratory and office, four research and preparation rooms, a small demonstration theatre and an assistant's room. The northern half is occupied by the students' laboratory, a room 76 x 40 feet, splendidly lighted and equipped with all the necessary apparatus for modern laboratory instruction. The third floor is taken up wholly by the Department of Anatomy and contains besides private offices and research rooms for the Professor and staff, a large dissecting room, 88 x 40 feet, excellently lighted and fully equipped. There is also on this floor a large lavatory and students locker room. Between the second and third floor is a mezzanine floor which is devoted to the Department of Parasitology. Here, besides the private offices and research rooms of the Professor, there are four fully-equipped laboratories for advanced work. The west wing contains a large assembly hall. The remaining space is occupied by the Departments of Pharmacology and Hygiene.

The Old Medical Building.—The Laboratory or North Wing of the Old Medical Building contains the laboratories for medical chemistry and physiology. The ground floor is set apart for medical chemistry. On the eastern side of the hall is the students' laboratory, 45 by 80 feet, which is well equipped for 100 students. A research laboratory, with eight working places and adjoining professor's room, private balance room, etc., connect with the large laboratory. On the western side of the hall is the lecture room, connected with two preparation rooms, store-rooms and a small biochemical museum. The students' balance room and a dark room for polariscopic and photographic work are opposite the main entrance to the chemical laboratory. Laboratory courses in general chemistry of the first year, organic and biological of the second year, and the physiological and clinical chemistry of the third year are given in the large laboratory. All classes are taken in sections. The mezzanine floor contains the lecture room for physiology and a series of laboratories for advanced work in practical physiology. The top floor is devoted entirely to physiology, there being two large laboratories and several smaller research and preparation rooms.

The Macdonald Engineering Building.—This building is designed to provide accommodation for six hundred students. The Departments of

Civil Engineering and Architecture are permanently provided for, while the Department of Electrical and Mechanical Engineering are given temporary accommodation until such time as independent buildings can be provided for the growing numbers in these departments. The ground floor is given up to the civil engineering, geodetic, electrical and mechanical engineering laboratories and is for the most part 23 feet in height. Mechanical and electrical engineering laboratories and the workshops also occupy the three lower floors of the Workman Building. The centre portion of the second floor is used for purposes of administration (faculty rooms, offices, library, etc.). The front parts of the second and third floors are occupied by eight class rooms which contain 470 sittings, while the upper floors, both of the Engineering Building and the Workman Building are devoted to drafting rooms, containing over 500 tables. The building throughout is of the most approved fire-proof construction, not only in the matter of materials, but in arrangement as well, the several floors being divided by fire walls and fire doors into separate sections. It was erected at a cost of about half a million dollars.

The Macdonald Chemistry and Mining Building.—In addition to the large lecture theatre, which seats about 250 students, there are here four lecture rooms for smaller classes and a number of offices. There are also three large general chemical laboratories (each with a floor space of about 2,400 square feet and accommodation for 200 students at a time), large laboratories for assaying, ore dressing and metallurgy, with a very complete equipment, and a number of smaller rooms and laboratories for special purposes, including research work. The reference library contains about 1,400 volumes.

The Macdonald Physics Building.—This building is five storeys in height, each floor having an area of 8,000 square feet. Besides a lecture theatre and its apparatus rooms, the building includes an elementary laboratory nearly 60 feet square, large special laboratories, a range of rooms for optical work and photography, separate rooms for private work, and two large laboratories arranged for research, provided with solid piers and the usual standard instruments. There are also a lecture room for mathematical physics, a special physical library and convenient workshops. The equipment of the Physics Building is exceedingly valuable and complete.

The Redpath Museum.—The Museum occupies a commanding position at the upper end of the campus, and besides its central hall and other rooms devoted to the collection, it contains a large lecture theatre, class rooms and work rooms. The collections in botany, palæonotology, geology and zoology are very fully and admirably arranged for teaching purposes.

The University Library.—This building is a fine example of the Romanesque style of architecture. The general reading room is 110 feet long, 44 wide and 34 high, and will seat 150 readers. The book stack, four and five storeys in height, has a working capacity of 250,000 volumes. For other information regarding the Library, see page 280.

The Observatory is well equipped for instruction in the use of meteorological instruments and in astronomical work.

The Power Station.—The new Power Station supplies heat to the following buildings: New Medical Building, Old Medical Building, Engineering and Workman Buildings, Chemistry and Mining Buildings, the Physics Building and the Arts Building. It also furnishes current for light and power to these buildings and to the Royal Victoria College, the Union and Strathcona Hall. The equipment of the station includes boilers of 1,000 H.P. nominal capacity, provision being made for future extension, and engines and generators of 600 kilowatt capacity. The coal bunkers hold 500 tons. The heating distribution is partly by tunnel and partly by underground conduit, the farthest building served being at a distance of 700 feet from the station. Electric cables are placed underground in vitrified clay conduits.

The Royal Victoria College.—This is a residential college for the women students of McGill University. It is situated on Sherbrooke Street in close proximity to the University buildings and laboratories. On the ground floor are the offices of the administration, lecture rooms, students' common room, and a spacious dinning hall. A gymnasium is fitted up in the basement. On the first floor are other lecture rooms, the library, reading room and a handsome assembly hall. The second and third floors are given up entirely to rooms for resident students. These rooms are handsomely furnished, as indeed is the whole building. The rates for board and lodging are very reasonable. Full information on all points can be obtained from the Warden. See also page 283.

The McGill Union stands at the corner of Sherbrooke and Victoria Streets, within two minutes' walk of the College gates. The building measures 93 feet by 71 feet and consists of three storeys and a basement. On the main floor are the dining and luncheon rooms; on the second floor, billiard rooms, a news hall, a reading room and library, a study and a lounging gallery (88ft. by 21 ft.). The large hall is situated in the top storey. It measures 88 ft. by 45 ft. and has a seating capacity of 400. There are also smaller rooms for society meetings, etc. In the basement are baths, locker rooms and an exercise room (24 ft. by 38 ft.). The Union is the social centre of the University, the common meeting ground for students of all faculties. It is intended to promote a broad and true university spirit.

Strathcona Hall is the home of the Young Men's Christian Association of the University. The building is 55 feet by 110 feet, and is five storeys in height. The three upper storeys are arranged to afford residental accommodation for about sixty students. On the ground floor are the secretary's office, sitting rooms, cloak rooms and a hall capable of seating 350 persons. The second floor contains a large reading room, a large game room, and five small rooms for the use of clubs and societies.

LABORATORIES, MUSEUMS AND WORKSHOPS.

1. LABORATORIES.

CEMENT LABORATORIES.

The laboratory is equipped for making complete tests on the strength and properties of cements, mortars, concrete, concrete beams, etc., and includes the following:—Tensile testing machines, hydraulic compression machine (50 ton), specific gravity apparatus, sieves for fineness tests, steaming apparatus, Vicat's and Gilmore's needles, metal moulds, mixers, rammers, balances, etc. Tanks are provided for the storage of briquettes and other test specimens, and the equipment is supplemented by that of the strength of materials laboratory in making tests on large sized specimens.

All engineering students make the standard test on cements and mortars and also tests of concrete, plain and reinforced, as part of the instruction in Strength of Materials.

CHEMICAL LABORATORIES.

(*In the Chemistry and Mining Building.*)

The three principal laboratories have each a floor-space of about 2,400 square feet and together have accommodation for nearly two hundred students working at a time. They are lighted on three sides, have special ventilation and have ample hood space. Laboratory A is planned for beginners, and the other two for more advanced work; B for quantitative analysis and C for organic preparations and qualitative analysis. In connection with each of the main laboratories is a balance-room equipped with balances by several of the best makers and an instruction room.

Physical chemistry is provided for in a special laboratory, nearly 30 by 40 feet, supplied with electricity, steam, vacuum pumps, etc. The equipment of this laboratory consists of the apparatus necessary for the determination of the specific gravities of solutions, of the depression of freezing point, of the rise of boiling point, and of densities of gases and vapours. There are constant-temperature baths for accurate measurement of solubilities, Kohlrausch's apparatus for determining the electrical conductivity of solutions, and the apparatus necessary for measuring the electromotive forces generated between metals and their solutions, and in voltaic cells generally. There are also calorimeters for measuring the heat effects produced in chemical reactions. On the same floor there is an optical room, devoted more particularly to crystallographic work and furnished with goniometers, polarising microscopes, axial-angle apparatus, refractometers, etc.

Immediately adjoining the laboratory of physical chemistry is the photographic department, supplied with two dark rooms, arranged on the maze system, and provided with the necessary appliances for all ordinary photographic work, including an enlarging camera and apparatus for micro-photography.

The laboratory for gas analysis is fitted with a large tank to contain water at the temperature of the room, for use in obtaining a constant temperature in the measurement of gases. The tables are arranged for work with mercury, and the laboratory is supplied with the apparatus of Hempel, Dittmar, Orsat, Elliot and others. It contains also Fleuss, Boltwood, and Töpler pumps for producing high vacua.

The laboratory for electrolytic analysis is supplied with accumulators, thermopiles, platinum electrodes, rheostats, ammeters, voltmeters, etc.

Another room has lately been equipped with electric furnaces and other appliances for electro-chemical work.

The organic department comprises a laboratory for preparations and research, a combustion room for analysis, a dark room for polariscope and saccharimeter work, and a lecture room. The laboratory is fitted with all the necessary apparatus for organic research—special hoods for work with poisonous gases, regulating ovens for digesting and drying at various temperatures, filter presses for the extraction of raw materials, and various forms of apparatus for distillation in vacuo. The dark room is equipped with polariscopes and saccharimeters for sugar work. There is a large supply of the necessary organic chemicals, which are supplied free of charge to students engaged in routine or research work in this department.

The laboratory for industrial chemistry is especially ventilated and fireproofed. Here operations on a semi-commercial scale may be conducted, involving the use of explosive and other dangerous chemicals.

The Chemistry Building is well supplied with small research laboratories for graduate and other research students.

ELECTRICAL LABORATORIES.

The experimental equipment of the electrical department is contained in the fourth year, third year, standardizing, high voltage, oscillograph and photometer laboratories. Power is supplied to these laboratories from the 220-volt, 3-wire, D.C. generators in the central power house. The voltage is maintained approximately constant on the two sides of the system by a balancer set located in the fourth year laboratory, which is also equipped for supplying constant voltage circuits of 125 volts.

The Fourth Year Laboratory is equipped primarily for the study of alternating current phemomena and is equipped with: Motor-driven alternators of various types, giving a range of frequency of from 25 to 250 cycles per sec.; single and polyphase induction motors of the squirrel cage and wound rotor types; single phase series and repulsion motors; constant oltarge and constant current transformers; mercury arc rectifier; rotary converters; potential regulators; meters for the measurement of current,

voltage, power, frequency, power factor, and wave form; rheostats, circuit breakers, condensers, reactance coils, synchroscopes and other auxiliary apparatus. An electric travelling crane spans the laboratory and gives facilities for the rearrangement of the machines.

The Third Year Laboratory is used by the third year electrical students for the study of current flow in circuits and of direct current machinery. It is also used by the students of other departments who are taking an elementary electrical course, for the study of both direct and alternating current phenomena. The laboratory is equipped with: Shunt, compound and series wound direct current generators and motors of different types; constant current generators; arc and incandescent lamps; meters for the measurement of current, voltage and power; rheostats, circuit breakers, starters and other auxiliary apparatus. Several small alternators, transformers, rotary converters and induction motors along with the necessary instruments and control apparatus are provided for use by the students taking the general elementary course. A hand-operated travelling crane gives facility for the rearrangement of the machines.

The Standardizing Laboratory is equipped for the accurate measurement of direct currents to 1,000 amperes and voltages to 1,500 and of alternating currents to 200 amperes and voltages to 1,500. By the use of standard instrument transformers, alternating currents to 5,000 amperes and voltages to any reasonable value may be accurately measured. The equipment includes: Kelvin current and watt balancers; Weston laboratory standard ammeters, voltmeters and wattmeters; potentiometers; Wheatstone and conductivity bridges; galvanometers, standard resistances and cells and other special apparatus.

The power is obtained from two motor generator sets, from one of which direct current to 1,000 amperes may be obtained and from the other alternating current may be obtained over a considerable range of frequency up to 1,500 amperes and at any phase relation to voltages up to 440.

The High Voltage Laboratory contains the following equipment: Four 200 to 50,000 volt transformers supplied with condenser bushings and insulated so as to operate up to 300,000 volts; one 200 to 2,000 volt insulating transformer; one 110 to 20,000 volt testing transformer; standard spark gaps for oil and air; cathode ray tubes, electrostatic voltmeters and other auxiliary equipment. The trausformers are provided with auxiliary voltage coils for direct pressure measurement and for connection to the oscillograph. The connections to this laboratory are such that any machine in the department may be used as a source of power and controlled directly from the transformer room, so that a wide range of frequency and of wave form is available for experimental work.

The Photometer Laboratory contains a Reichaustahlt type precision photometer bar with a wide range of certified standard incandescent lamps, hand operated and power driven universal rotators, motor driven sector disk and a complete set of screens also a Matthew's integrating photometer for incandescent lamps. A Sharp Mollar portable photometer and stand-

ardizing set is also installed with a full range of controlling rheostats and instruments provided with permanent wiring.

Oscillograph Laboratory This is equipped with a Blondel triple oscillograph with both visual and photographic attachments and is specially adapted for the study of transient phenomena. The department maintains a small machine shop for instrument and machine repair and for the construction of special experimental apparatus.

Wireless Telegraph Laboratory.—A permanent aerial, 350 feet in length, of the inverted "L" type, has been installed, with a natural wave length of 600 metres. Waves varying in length from 500 to 8,000 metres can be detected. A number of receiving sets have been loaned to the department and others are being constructed.

FOREST PRODUCTS LABORATORIES OF CANADA.

The Forest Products Laboratories of Canada, established by the Canadian Government in 1913 under the Forestry Branch, Department of the Interior, are associated with McGill University, and are located at 700 University St., Montreal. The primary function of the laboratories is experimental research in the utilization of forest products, as a means toward the improvement of present industrial methods and the extension of commercial opportunities in this field.

There are four operating divisions, for technical research in timber tests, timber physics, pulp and paper and wood preservation. Provision is made for the establishment of other research divisions, as opportunity develops.

The Division of Timber Tests is engaged in the investigation of the mechanical properties of Canadian woods, primarily for the collection of data on the relative strength values of various species, as a basis for classification of timber as structural material and for miscellaneous commercial uses. The testing work of thjs division is carried out in the Strength of Materials Laboratories of McGill University. By arrangement with the University, provision has been made for the joint use of the Wicksteed, Emery and Riehle testing machines included in the equipment of this University department. The Forest Products Laboratories have installed one 30,000 pound capacity Olsen Universal machine, fitted with attachments of special design to meet the requirements of various testing methods, and one Hatt-Turner impact machine. Accessory apparatus includes deflectometers, compressometers, planimeter and calculating machines for reduction of test results. A saw mill and wood working shop are maintained in connection with this division. Another timber testing laboratory has recently been established in co-operation with the University of British Columbia, Vancouver, B.C.

The work of the Division of Timber Physics includes the investigation of the physical properties of wood,—specific gravity, moisture content, rate of growth, etc.—for correlation with mechanical and other characteristics, the microscopic anatomy of wood and study of fibres, and photography.

Drying racks, electric ovens and balances are in use for this work, while apparatus for microscopic study includes one Jung-Thoma microtome (Thomson modification), two microscopes, microscopic micrometers and accessory appliances for use in preparation of slides, fibre measurements and other microscopic determinations. The photographic department of the division is provided with a fully equipped dark-room and complete range of photographic apparatus, including special Bausch and Lomb horizontal photomicrographic outfit, cameras and projection lantern.

The Division of Pulp and Paper is engaged in the investigation of the paper-making possibilities of Canadian woods, the practical study of processes related to this field and research in fundamental problems of the chemistry of wood. A complete semi-commercial paper mill has been installed for investigation on a large experimental scale. This equipment includes one single Marx beater, one double Marx beater, one small Jordan engine for refining paper stock; one riffler, one Packer flat screen, and one complete Pusey and Jones paper machine (wire 25 feet by 33 inches). Other equipment includes one complete Erfurt sizing system for preparation of rosin size, two gas fired boilers, small digester and paper testing instruments. Larger digesters, corresponding in capacity to the larger experimental equipment, are planned for future installation. The chemical laboratory of this department is provided with complete equipment for experimental research in the chemistry of wood.

The Division of Wood Preservation is concerned with the investigation of methods of preservative treatment for the protection of timber against decay and insect destruction. The experimental laboratory of this division is provided with equipment for impregnation of wood with preservatives under pressure. This equipment includes one horizontal retort, 2 feet in diameter and 12 feet long; operating tank of corresponding capacity; one small vertical retort and tank, all designed for high pressure; pumps, air compressor and dry vacuum pump, receivers and condenser. A chemical laboratory in this department is used for analysis of preservatives and examination of treated material. A small laboratory is equipped for experimental studies in wood pathology, which includes the development of cultures of wood destroying fungi, accelerated tests of durability and microscopic examinations.

GEODETIC LABORATORY.

The equipment of this laboratory consists of:—

(1) Linear instruments: a Rogers comparator and standard bar for investigating standards of length; a fifty-foot standard and comparator for standardizing steel bands, chains, tapes, rods, etc.; a Munro-Rogers linear dividing engine.

(2) Circular instruments: a Rogers circular comparator; four level triers.

(3) Time: an astronomical clock and clock circuit in connection with the observatory clocks; chronometers running on mean and sidereal time; chronograph.

(4) Gravity: a portable Bessel's reversible pendulum apparatus with special pendulum clock and telescopic apparatus for observing coincidence by beats.

(5) A water gauge apparatus for testing aneroid barometers.

The laboratory and clock rooms are constructed with double walls and enclosed air spaces, and their heating is controlled by special thermostats, so that the temperature within may be brought to, and held at, any desired degree.

Astronomical Observatory.

The observatory equipment for the purpose of instruction in practical astronomy consists of:—A Bamberg prismatic transit with zenith attachment; six astronomical transits for meridian observations; two Troughton & Simms' zenith telescopes; sidereal and mean time clocks and chronometers, chronograph and electrical circuits by which observations and clock comparisons within or without the observatory may be made.

HYDRAULIC LABORATORY.

In this laboratory the student studies experimentally the laws governing the flow of liquids through orifices, pipes, weirs, etc., and also carries out experiments on the efficiency of various forms of water motors running under different conditions as regards head and supply.

The equipment includes:—Apparatus for the measurement of the discharge of water from orifices, nozzles, weirs, etc., under varying conditions; arrangements for investigation of the loss of head by surface friction, and at curves and bends in pipes; Venturi meter for use at different discharges; a hydraulic ram working against different heads; various water motors, including Pelton wheels, Girard impulse turbine, Brotherhood three cylinder rotary engine, Thomson inward flow reaction turbine, American turbine; apparatus for measurement of pressure due to impact of jets on surfaces of different forms; gauge testing appliances; Hele Shaws's apparatus for study of the steam lines in a perfect fluid, illustrating the flow round obstructions in a channel, and numerous magnetic problems; numerous calibrated tanks, weighting appliances, and measuring apparatus in connection with the above.

MECHANICAL ENGINEERING LABORATORIES.

These laboratories are used in connection with the courses in Mechanical Engineering subjects. The smaller apparatus belonging to the laboratories includes the necessary equipment of weighing machines, ordinary and water dynamometers, steam calorimeters, thermometers, gauges,

pyrometers, coal, gas and oil calorimeters, indicators, planimeters, flue gas analysis, etc.

1. Mechanical Laboratory.

The equipment of this laboratory includes:—A belt testing machine capable of taking a six inch belt at 15 feet centres (the machine has special hydraulic dynamometers and a friction brake and will absorb 15 H.P.); a Thurston railway pattern oil tester, fitted with water cooling and heating apparatus for varying the temperature of the brasses as desired; standard viscosimeters and other necessary apparatus for the physical testing of lubricants; a high speed horizontal engine having a cylinder 6 inches diameter 9 inches stroke, and operated by compressed air; a gas-fired pre-heater for the above engine; two standard 9½-inch Westinghouse airbrake pumps, fitted for testing and for supplying compressed air for experimental and other purposes; a non-rotative Blake steam pump, having steam and water cylinders 4½ and 2¾ inches diameter and 4½ inches stroke; apparatus for measuring the heat loss from pipe coverings and from radiators; a specially designed hydraulic support and fittings, for carrying out experiments on the action of cutting tools in the lathe; apparatus for experiments on the efficiency of pulleys and hoisting appliances; on the efficiency of worm and other gearing, for governor testing; for testing fans and blowers; for studying problems connected with the balancing of reciprocating engines.

2. Steam Engine Laboratory.

This laboratory is furnished with an experimental steam engine of 120 I.H.P., specially designed for investigating the behaviour of steam under various conditions. The cylinders are 6½ inches, 9 inches, 13 inches and 18 inches in diameter, and the stroke of all the pistons is 15 inches. The cylinders can be so connected as to allow of working as a single, compound, triple, or quadruple expansion engine, either condensing or non-condensing, and with any desired rate of expansion. The jackets are so fitted as to permit of measuring independently the water condensed in the cover, barrel, or bottom jacket of each cylinder, and the engine can be worked with any desired initial pressure up to 200 lbs. per square inch. The measurements of heat are made by means of large tanks, which receive the cooling water and the condensed steam. There is an independent surface condenser and air pump. Two hydraulic absorption brakes and an alternative friction brake serve to measure the mechanical power developed. This laboratory also contains the following machinery:—A Robb automatic cut-off engine, having a cylinder 10½ inches in diameter by 12 inches stroke, which is specially fitted up for the measurement of cylinder temperatures, and can be run at speeds up to 300 revolutions per minute; an automatic high speed engine by Macintosh & Seymour, having a cylinder 12 inches in diameter by 12½ inches stroke, in connection with which there is an automatic recording apparatus for registering the load on the brake; a Leonard horizontal engine, having a cylinder 8 inches diameter by 9 inches stroke, specially fitted for instructional work in valve setting and

provided with an independent surface condenser; a two stage air compressor (built in the workshops of the Department) taking 40 H.P., and having cylinders 10 inches and 17 inches in diameter, by 15 inches stroke (the compressor delivers its air into reservoirs placed beneath the floor of the machine shop, and is provided with an intercooler whose capacity can be varied as desired); a 15 K.W. Curtis steam turbo-generator with independent surface condenser, air pump, and a bank of lamps for varying the load; two 12 H.P. high speed forced lubrication compound engines (built in the workshops of the Department), one of which is used to drive a Hall 1-ton Co_2 ice machine.

Steam is supplied to this laboratory by the boilers in the Workman Building. These consist of one 100 H.P. locomotive boiler, Belpaire type, fitted with Howden oil burning furnace, two Babcock and Wilcox water tube boilers, each 60 H.P., and one Yarrow water-tube boiler, fitted in a closed stokehold, for working under forced draft, rated at 100 H.P. These boilers are fitted with the necessary tanks, weighing machines and apparatus for carrying out evaporative tests. For the study of superheated steam, there is a B. & W. separately fired superheater.

3. Gas Engine Laboratory. This laboratory contains a horizontal gas engine by the National Gas Engine Company, having a cylinder 12 inches diameter by 20 inches stroke and developing 40 B.H.P.; a suction type producer for the above, with the necessary scrubbers and gas cleaning apparatus; a down draft producer designed for working with lignite and bituminous coal; a standard 4-inch gas meter, gasometer, and exhauster; a 10 B.H.P. Otto type gas engine (built in the workshops of the Department), having a cylinder 8½ inches diameter by 12 inches stroke; a 14 B.H.P. 2-cylinder 2-cycle Grey gasoline engine and a 4 H.P. Blackstone oil engine.

METALLURGICAL AND ASSAYING LABORATORIES.

These consist of a large furnace room of 2,000 sq. feet,for metallurgical operations, a furnace room for assaying of 1,300 sq. feet, a balance room, small chemical laboratory, and parts of other rooms, which are utilized for pyrometric and photo-microscopic work. The furnace room is fitted with a water-jacket blast-furnace, 21 inches inside diameter, for smelting lead and copper ores; also a hand reverberatory furnace for roasting ores, having a hearth 14 ft. by 6 ft., and a Bruchner roasting furnace.

The furnace room adjoins the milling and ore-dressing room (see below), and ores which have been crushed and dressed can easily be conveyed into the furnace room for roasting, smelting or leaching treatments. In addition to this comparatively large scale plant, apparatus has been provided to enable the students to study in detail the more important metallurgical operations, using quantities of ore or metallurgical products of usually not more than a few pounds in weight. With such appliances, the work of the student can be of a more individual character than is generally possible with large-scale plants, and the reactions which occur can be more easily and exactly studied.

For the purpose of small-scale work there is a large crucible furnace which can be used with either natural or forced draught, an oil-fired crucible furnace, a large gas-furnace which can be used either as an oven-furnace or a muffle furnace, and a number of small muffle and crucible furnaces in the assaying laboratory. Several small dental furnaces have recently been added for the course of instruction in dental metallurgy.

Small blast-furnaces, lined with brick, have been constructed and used successfully for smelting small quantities of copper and cobalt ores. A Roots' blower has been provided for the blast furnaces, and connections for supplying forced draft have been made to the gas and reverberatory furnaces. Leaching operations on a small scale are conducted in stoppered bottles whcih can be agitated by machinery.

Provision has also been made for electric furnace work. The plant consists of a 50 H.P. motor and a 30 K.W. alternating current generator together with transformers and measuring instruments. A Colby induction furnace and a Rennerfelt arc furnace have been installed for making steel electrically, and the smelting of ores and other electric furnace operations can be carried on satisfactorily with this plant. A low-voltage 1 H.P. direct-current generator is employed for electrolytic operations.

A powerful hydraulic press and a piece of apparatus for compressing gases by hydraulic power are available for experiments that have to be conducted under great pressure.

A small drop-testing machine, a Sankey metal bending tester, and a Brinell Hardness tester have been installed for investigating the mechanical properties of metals.

The assaying laboratory is equipped with a number of muffle and crucible furnaces fired with coke, a large gas muffle furnace and a small muffle furnace and crucible furnace fired by gasoline.

Adjoining the assaying laboratory is the balance room and a small laboratory for chemical work. In another room are a number of electrical and other pyrometers, and a micro-photographic outfit for recording the microscopic structure of metals and alloys. Polishing machines worked by power have been installed to prepare the specimens for examination.

MINING AND ORE-DRESSING LABORATORIES.

The Department of Mining Engineering has one large laboratory for ore-dressing, and a number of rooms of moderate size equipped for use as special laboratories, offices, lecture room, dark room, machine shop, etc. The effective floor space is about 8,500 square feet, in addition to which the departmental store rooms, ore bins, etc., have an area of 1,500 feet.

The ore-dressing laboratory proper is built in two storeys about a central well and has about 5,000 feet total floor space. The equipment comprises two classes of apparatus. First, a large number of pieces especially designed for individual work on a small scale. Many of these are for elementary investigations and demonstrations of a theoretical nature, others are working reproductions on a reduced scale of typical ore dressing

and milling machines. Second, a complete plant of standard apparatus for ore crushing, sampling, milling, concentrating and for coal washing. This apparatus has been chosen from the best designs in common use and whenever possible each important class of ore-dressing machinery is represented by two or more different types, in order that comparisons may be made. Each machine is so arranged that it may be used and tested independently, but, when expedient, a number of machines can be connected by conveyors, and thus complete plants of various kinds can be improvised, each of sufficient capacity to test large lots of material under approximately working conditions.

The chief pieces of apparatus in the main laboratory are rock-breakers of four kinds, Blake, Dodge, Gates, and Sturtevant, for coarse crushing; gravity stamp mills of 600 and 950 lbs., respectively, a Nissen stamp of 1,200 lbs., a small steam stamp and a 3-foot Huntington centrifugal roller mill, for crushing and amalgamating; high speed steel-tyred rolls for fine crushing; Sturtevant and Gates' grinders for preparing samples, and ball mills, pebble mills and amalgamation pans for extremely fine grinding. Following these there are Bell, Jones and Brunton samplers; a Callow belt screen, a series of trommels and power shaking screens for sizing the crushed ores, two especially designed jigs of two and four compartments with adjustable eccentric, cam and slide mechanism, a pneumatic jig, a Richards' pulsator jig, a Taylor vibrating jig and several small hand and power jigs for coarse and medium concentration; bumping and stationary tables of several types, including a Frue vanner, a Wifley table, and a series of Bell's feeders, etc., for separating valuable minerals contained in the fine sands and slimes; plates, pans and barrels for amalgamating gold and silver ores; agitators, vats, vacuum filters, and other apparatus for flotation, cyaniding and other extraction processes; spitzkasten, spitzlutte, magnetic separators, an electrostatic separator, coal washers, cones, and various other special pieces of ore-dressing apparatus.

An hydraulic lift and a number of belt and bucket and hydraulic jet elevators, feeders, samplers, steam-jacketed drying tables, etc., are provided for use in heavy continuous work. The power chiefly used is electricity, generated in the University power and light station and utilized through a number of independent electric motors aggregating 75 H.P. conveniently placed near the machines to be operated, but steam is used for some pieces of apparatus and others may be driven by a Pelton wheel. A motor-driven air-compressor of 7½ H.P. provides an ample supply of compressed air. The department is equipped with suitable apparatus for electrical measurements, and is thus able to make continuous and accurate determination of the amount of power used by each machine.

In addition to the main laboratory there are excellent facilities for advanced and research work—including a small but thoroughly equipped chemical and assay laboratory and photographic room. The department possesses a number of cameras, microscopes, recording gauges and indi-

cators, a good equipement of weighing and measuring devices, and a number of pieces of special apparatus for advanced theoretical investigation.

PETROGRAPHICAL LABORATORIES.

The petrographical laboratory, containing the chief rock collections of the University, is situated in the Chemistry and Mining building. It is provided with a number of petrographical microscopes by Seibert, Crouch, and Fuess, as well as with models, sets of thin sections, electromagnets, heavy solutions, etc., for petrographical work.

A collection of typical rocks has been especially prepared for the use of students, and a complete equipment for cutting, grinding, and polishing rocks has been installed, which runs by electric power and gives excellent facilities for the preparation of thin sections for microscopic use.

For advanced work and petrographical investigation Dr. Adams' extensive private collection of rocks and thin sections is available for purposes of study and comparison.

THE PHYSICAL LABORATORIES.

The equipment of the Macdonald physical laboratories comprises: (1) apparatus for illustrating lectures; (2) simple forms of the principal instruments for use by students in practical work; (3) various types of all important instruments for exact measurements, to be used in connection with special work and research.

The magnetic laboratory contains magnetic instruments and variometers of different patterns, and also a duplicate of the B. A. Electrodynamometer. The laboratory on the opposite side of the basement contains a Lorenz apparatus for the absolute measurement of resistance, constructed under the supervision of Prof. Viriamu Jones.

There is a constant temperature room, surrounded by double walls, which is fitted for comparator work.

The first floor contains the main electrical laboratory, which is a room 60 feet by 40, and is fitted with a number of brick piers, which come up through the floor, and rest on independent foundations, in addition to the usual slate shelves around the walls. This room contains a large number of electrometers, galvanometers, potentiometers, and other testing instruments of various patterns, and adapted for different uses. Three small research laboratories adjoin the elctrical laboratory. A well-equipped workshop serves for the construction of research apparatus and repair work.

On the second floor of the building there is the heat laboratory, devoted to advanced work in thermometry, pyrometry and calorimetry and also to such electrical work as involves the use of thermostats and the measurement of the effects of temperature. This adjoins a private laboratory fitted for research work.

The third floor contains two small lecture rooms, a library and reading room for the staff, an elementary laboratory and professors' rooms.

The fourth floor contains the large elementary laboratory, a room 60 feet square, devoted to elementary practical work in heat, sound, light, electricity and magnetism. There is a demonstrators' room adjoining, and an optical annex devoted to experiments with lenses, galvanometers, etc., which require a darkened room. On the other side of the building there is a spectroscopic room, containing a six-inch Rowland grating, with mountings by Brashear, and other large spectrometers and polarimeters; also a series of smaller optical rooms, including a photometric room, especially fitted for arc photometry and a dark room for photographic work.

LABORATORY OF PHYSIOLOGY.

The physiological laboratory occupies part of the old Medical Building. It consists of a large general laboratory, with accommodation for 80 students working at one time.

THE PSYCHOLOGICAL LABORATORY.

The psychological laboratory occupies two rooms in the Arts Building. It contains apparatus for the study and investigation of sensation, perception, ideas, memory, association, attention, volition, feelings, emotions and reaction. This equipment serves three purposes: First, it is adapted to research work in the various fields of experimental psychology, including physiological psychology, educational psychology, and applied psychology. Second, it is used to acquaint beginners with the methods of experimental psychology, both qualitative and quantitative. Third, it furnishes material for experimental demonstration in the elementary and advanced lecture courses.

STRENGTH OF MATERIALS LABORATORIES.

These laboratories are equipped with apparatus for the determination of the physical properties of the materials of construction and for illustrating the fundamental laws of the strength of materials. The equipment includes:—

(*a*) Riehle testing machine of 60,000 lbs. capacity, a Wicksteed 100-ton, a Wicksteed 50-ton, and an Emery 75-ton machine for testing the tensile, compressive and transverse strength of the several materials of construction. To the Wicksteed has been added a specially designed arrangement, by which the transverse strength of girders and beams up to 26 ft. in length can be determined. Special holders have also been designed and made in the laboratory for investigating the tensile and shearing strength of timber, and for the testing of wire ropes, belts, etc. An Olsen machine of 10,000 lbs. capacity is used for testing wire.

(*b*) A Rondet-Schor Machine, with a capacity of 500 kilograms for testing textile fabrics.

(*c*) A Torsion Machine with a specially designed angle measurer, by which the amount of the torsion can be measured with extreme accuracy.

(*d*) An accumulator, furnishing a pressure of 3,600 lbs. per square inch, which is transmitted to the several testing machines, and ensures a perfectly steady application of stress, an impossibility when any form of pump is substituted for an accumulator. An automatic electric motor has been designed in the laboratory and constructed for the purpose of actuating the accumulator.

(*e*) A Blake and Worthington steam pump and an electric pump, designed to work against a pressure of 3,600 lbs. per square inch. The accumulator may be actuated by any of the pumps, and, if at any time it is necessary to do so, any of the pumps may be employed to actuate the testing machine direct. When in operation the work of the pump and the accumulator is automatic.

(*f*) Extensometers of the Bovey, Ewing, Unwin, Martens, Marshall and other types.

(*g*) Portable cathetometers, and also a large cathetometer specially designed and constructed for the determination of the extensions, compressions and deflections of the specimens under stress in the testing machines.

(*h*) Various electric motors for working the several machines.

(*i*) A drying oven for beams up to 26 feet in length. The hot air in this oven is kept in circulation by means of a fan driven by an electric motor.

(*j*) Numerous gauges, amongst which may be specially noticed an Emery pressure gauge, graduated in single lbs. up to 2,500 lbs. per square inch. All of the testing machines are on the same pressure circuit, and are connected with the Emery gauge and also other standard gauges, including recording gauges. This arrangement provides a practically perfect means of checking the accuracy of the testing.

(*k*) Special apparatus and recording gauge for the testing of hose, etc.

(*l*) Dynamometers for measuring the strength of textile fabrics, the holding power of nails, etc.

(*m*) Apparatus for determining the elasticity of long wires.

(*n*) Apparatus for determining the hardness of materials of construction, including Shore scleroscope.

(*o*) Zeiss and other microscopes.

(*p*) Delicate chemical and other balances. A very important part of the equipment is the Oertling balance, capable of indicating with extreme accuracy weights of from .00001 lb. up to 125 lbs.

(*q*) Apparatus for the microscopic study of metals and for microscopic photography.

(*r*) Micrometers of all kinds, including a 10 inch Howard gauge.

(*s*) A transverse bending machine which is adapted for loads up to 3,000 lbs. and for beams of 10 ft. span and a testing machine for applying bending and torsion simultaneously.

ZOOLOGICAL LABORATORIES.

The Zoological Department occupies the whole of the uppermost floor of the east wing of the Arts Building and the larger portion of the floor immediately below.

It consists of:—

(*a*) A large laboratory affording accommodation for a class of 80 students.

(*b*) A smaller laboratory capable of seating about 18 students.

(*c*) Three small laboratories fitted up for purposes of research.

2. MUSEUMS.

ARCHITECTURAL MUSEUM.

The Museum of the Department of Architecture contains a representative collection of historic casts illustrating the development of architectural ornament and form, and the technique of architectural material. Many of the casts have been specially prepared for the Department. The group of English mediaeval art is unique in any University on this continent. The collection of metal work includes examples of iron, brass, copper and jewellery, and is arranged so as to exhibit the technical possibilities of the material.

MUSEUM OF HYGIENE.

DIRECTOR:—PROF. T. A. STARKEY.

The material in the museum has been rearranged with a view to exhibiting not only specimens of the best and most approved types of appliances in each particular branch of public health, but also examples of types which are to be avoided on hygienic principles.

In order to facilitate study and reference, the specimens have been classified upon a decimal system under the following sections:—

1. *Disinfection.*—Including disinfecting apparatus of all kinds, disinfectants and antiseptics.

2. *Lighting and Heating.*—Showing contrivances used for these purposes.

3. *Water.*—Showing conditions connected with pollution of water supplies, whether derived from the surface or underground sources; methods of purification on large and small scales; water pipes, etc., and the influence which these fittings may exert upon the water contained therein.

4. *Soils and Buildings.*—Building sites, various kinds of soils; relation between soil and dampness; permeability of soils to gases and water; composition of soils; effects of ground moisture on dwellings; measures to be taken against dampness and foul air; and building materials of all kinds.

5. *Air.*—Including ventilation schemes and appliances; climate and meteorology, with apparatus illustrative of each class.

6. *Foodstuffs.*—Adulterations and sophistications practised; samples of unsound foodstuffs.

7. *Bacteriological and Pathological.*—Specimens of diseased meats; specimens and slides of all the common micro-organisms, pathogenic and non-pathogenic.

8. *Clothing.*—Specimens of all the materials utilized for the manufacture of clothing, showing the raw state and the various processes through which they pass until the finished product is reached; the hygienic value of these various articles.

Injuries and deformities which may directly result from the use of badly designed articles of clothing; history and evolution of clothing.

9. *Drainage and Refuse Disposal.*—This section includes every type of appliances used as sanitary fixtures in buildings; drainage schemes; ultimate disposal of refuse both liquid and solid,—refuse destructors, and sewage disposal plants. The section also includes types of faulty methods and appliances which on principle ought to be avoided.

In addition to the regular museum exhibit, there is a collection of over 1,000 lantern slides illustrative of phases of hygiene. The slides have been so arranged as to be available for demonstrations as hand specimens.

A catalogue with text and full description of all the exhibits contained in the museum is issued by the University authorities, and may be purchased at the general office.

PATHOLOGICAL MUSEUM.

DIRECTOR:—PROFESSOR J. G. ADAMI.
CURATOR:—MAUDE E. ABBOTT, B.A., M.D.
ASSISTANT CURATOR:—JOSEPH KAUFMANN, M.D.
OSTEOLOGIST AND PREPARATOR:—E. L. JUDAH.

The Pathological Museum of the University consists to date of 3,122 mounted and catalogued specimens on shelves, and a considerable storage from which material is constantly being added. A descriptive catalogue is in process of preparation and the part on the Haemopoietic organs has been published by the Oxford Press. Other parts are available and are being made ready for print through the help of the Osler Catalogue and Cooper Funds. In addition the pathological collection of the Royal Victoria Hospital consists to date of 230 specimens mounted in colors, on shelves and catalogued, and much storage material for teaching purposes including an extensive set of microscopic slides and charts for pathological and clinical teaching.

THE PETER REDPATH MUSEUM.

HONORARY CURATOR:—PROF ARTHUR WILLEY.
CURATOR:—E. ARDLEY.

The large and valuable collections in botany, zoology, mineralogy and geology are arranged in such a manner as to facilitate the work in these departments.

The general arrangement is as follows:—

1. The botanical room on the ground floor contains the herbarium, consisting of 50,000 specimens of Canadian and exotic plants and collections illustrating structural and economic botany.

2 In the corridor on the ground floor is exhibited the Todd Ethnographical Collection from West Africa.

3. The Lyman entomological room is also situated on the ground floor. Mr. A. F. Winn is the entomological curator under the Lyman Bequest.

4. On the first floor is a room over the entrance hall, in which are cases containing archæological and ethnological objects, including collections from the Queen Charlotte Islands, from Egypt, and from West Africa.

5. This room opens into the great museum hall, on each side of which are alcoves with upright and table cases containing the collection in palæontology arranged primarily to illustrate the successive geological systems, and subordinately to this, in the order of zoological and botanical classification, so as to enable the student to see the general order of life in successive periods, and to trace any particular group through its geological history.

6. At the extreme end of the hall are placed the collections of minerals and rocks, arranged in such a manner as to facilitate their systematic study. In the centre of the hall are economic collections and large casts and models.

7. In the upper story or gallery of the great hall, are placed the zoological collections; the invertebrate animals in table cases in regular series, beginning with the lower forms; the vertebrate animals in upright cases, in similar order. The PHILIP CARPENTER COLLECTION of shells is especially noteworthy for its arrangement and completeness.

Papers and memoirs relating to certain type specimens in the collections can be obtained from the Assistant Curator. Classes of pupils from schools can be admitted on certain days under regulations which may be be learned from the professors or from the Registrar of the University.

3. WORKSHOPS.

The workshops, erected on the Thomas Workman Endowment, have a floor area of more than 20,000 square feet.

Equipment.—The carpenter shop and the pattern shop contain thirty-eight carpenters' and pattern-makers' benches complete with the necessary sets of hand tools, twenty-two wood-turning lathes with their turning tools, a large pattern-maker's lathe for faceplate work, one circular-

saw bench, a jig-saw, a band-saw, two wood-trimmers, a surface-planer, a thickness planer, a mortising machine, a saw-sharpener, and one universal wood-working machine.

The smith shop is provided with twenty Sturtevant forges, which are power-driven and are connected with an exhaust fan. There is a power hammer, and the necessary equipment of anvils, swage blocks, sets, flatteners and other tools. Provision is made for instruction in soldering and brazing.

The foundry has benches, tools and apparatus for bench and floor moulding and core-making, and is able to accommodate twenty students. A gas-fired brass melting furnace, a cupola for melting iron, and the necessary core-ovens and core-benches give facilities for undertaking iron foundry work in green and dry sand, and for brass moulding. The shop is served by a hand travelling crane of one ton capacity.

The machine shop has twelve 18-inch engine lathes, one 18-inch turret lathe fitted for stud and screw making, one 27-inch engine lathe, one 72-inch surfacing lathe, one brass-finishing lathe, one 36-inch vertical drilling machine with compound table, one universal milling machine with vertical milling attachment and dividing headstock, one planer capable of taking work up to 24 x 24 in. x 5 ft., one 9-inch slotting machine, one 16-inch shaper, one universal grinding machine, centering machine, a cutter grinder, a tool grinder, and an inch vertical drilling machine with compound table, one universal buffing and emery grinding machine. There are vise benches for eighteen students, with the necessary hand-tools, and a marking-off table. The tool-room contains a full equipment of drills, reamers, milling cutters, and accessories, gauges, calipers, and other measuring instruments.

All the machinery in the workshops is driven electrically by motors taking power from the generating station in the Macdonald Building.

REGISTER OF STUDENTS.

SESSION 1918-1919.

FACULTY OF ARTS.

FIRST YEAR

(McGill College)

NAME	STREET ADDRESS	CITY OR TOWN
Abbottsmith, Henry Bancroft	10 Bellevue Avenue	Westmount, Que.
Addy, Paul Herbert		Jordan, Ont.
Alexander, Benjamin (B.Sc. Course)	28 Durocher St.	Montreal, Que.
Anderson, Duncan Robinson	100 Park Ave.	Montreal, Que.
Avison, Henry Reade Charles		New Denver, B.C.
Barrett, Arthur Wm. Reddy	415 Metcalfe Ave	Westmount, Que.
Bieler, Jacques Louis	98 Columbia Ave	Westmount, Que.
Blackman, Israel (Comm. Course)	7 Church St.	Montreal, Que.
Bouillon, Ernest Linden		Paspebiac, Que.
Bullock, Theodore Lafleur		Roxton Pond, Que.
Burke, Kenneth Macnider		Metis Beach, Que.
Cahana, David	1265 Cadieux St.	Montreal, Que.
Campbell, George Campbell (B.Sc. Course)	123 Crescent St.	Montreal, Que.
Caron, Maurice Begly (Comm. Course)		Ste. Anne de Bellevue, Que.
Clarke, Frank Travers (B.Sc. Course)	334 Elm Ave	Westmount, Que.
Cohen, Lawrence ebulun	25 Rosemount Ave	Westmount Que.
Copland, Edward Bruce	4307 Montrose Ave	Westmount, Que.
Cousens, Henry		Bolton Centre, Que.
*Dawes, Richard Jeffrey	731 Sherbrooke St. W.	Montreal, Que.
*de Pinto, Jacob Philip		Ratgama, Ceylon.
Elliot, Howard L.	496 Victoria Ave	Westmount, Que.
Ellison, Max	235 Mance St.	Montreal, Que.
Falconer, Keith	47 Arlington Ave	Westmount, Que.
Finley, George Steele	273 Bishop St.	Montreal, Que.
Fitzmaurice, Lawrence Wylie		Campbellton, N.B.
Forsyth, David Thomas Irwin	432 Frontenac St.	Montreal, Que.
Fraser, Clarence Harrower	350 Mackay St.	Montreal, Que.
Fraser, Douglas Anderson		Quesnel, B.C.
Friedman, Norman Hiram (Comm. Course)	802 Dorchester St. W.	Montreal, Que.
Fritz, Horatio Warren Douglas	23 Wellington Row	St. John, N.B.
Gaboury, Marcel	324a St. Catherine St. W.	Montreal, Que.
*Gault, Percival Stanway	305 Stanley St.	Montreal, Que.
*Gillingham, H.H.A.		Musgrave Harbour, Newfoundland
Gittleson, Edwin (Comm. Course)	351 Edward Charles St.	Montreal, Que.
Glickman, Harry	328 Redfern Ave	Westmount, Que.
Gradinger, Carol Hyman	106 Bourget St.	Montreal, Que
*Grivalkis, George A. (Comm. Course)	66 Mance St.	Montreal, Que.
*Gualtieri, Eugenio Francesco		Thorold, Ont.

* Partial.

Name	Street Address	City or Town
Harris, Richard Colebrook		New Denver, B.C.
Hayes, Murray William	16 Windsor Ave	Westmount, Que.
*Heatherington, Elmer Standish (B.Sc. Course)		Cowansville, Que.
Higinbotham, Norman Lindsay	620, 12th St. S.	Lethbridge, Alta.
Hodgson, John Robert Leamon	205 Christophe Colomb St.	Montreal, Que.
Janes, Alexander Norman	153 Gower St	St. John's, Nfld.
Jerrom, Cyril Lewis		Cornwall, Ont.
Johnson, Andrew Stuart, Jr		Thetford Mines West, Que.
Jones, William Dan		Nelson, B.C.
Kanigsberg, Jacob Clarence (B.Sc. Course)	431 Henri Julien Ave	Montreal, Que.
Kellnor, Bernard Louis (Comm. Course)	450 Elm Ave	Westmount, Que.
Kennedy, William Roland	433 Mance St	Montreal, Que.
Kent, Leonard Ernest		Ste. Anne de Bellevue, Que.
Kerr, Thomas McLean	1280 Joseph St	Verdun, Que.
Laffoley, Paul Richard (Comm. Course)	735 Upper Belmont Ave	Westmount, Que.
*LaMontagne, Henri Gaston	802 Dorchester St. W	Montreal, Que.
*Lattoni, Mario	196 Milton St	Montreal, Que.
Lefkowitz, Abe (Comm. Course)	773 City Hall Ave	Montreal, Que.
Leslie, Angus Ogilvy	824 Dorchester St., W	Montreal, Que.
Lidstone, Victor	241 Querbes Ave	Montreal, Que.
Louson, Randolph M	4250 Avenue Road	Westmount, Que.
Lummis, Oswald John		Valcourt, Que.
McCullock, Frank Dudley (B.Sc. Course)	76 Hochelaga St., E	Moose Jaw, Sask.
MacDonald, Melvin Edward (Comm. Course)		Lake Megantic, Que.
McDougall, Geoffrey Springle	4343 Westmount Ave	Westmount, Que.
McDougall, James Malcolm		Aylmer East, Que.
MacKeen, Robert Arthur Haliburton		Rothesay, N.B.
Macklaier, William Fraser	851 Lorne Crescent	Montreal, Que.
McLean, Duart Vercoe (B.Sc. Course)	24, 41st Ave	Lachine, Que.
Mathewson, Clive	112 Ste. Famille St	Montreal, Que.
*Millen, Albert Edward		Damascus, Ont.
Miller, James MacBeath		Inverness, Que.
*Molson, Colin Jack Grascett	556 Pine Avenue	Montreal, Que.
Moore, Dale Hendry		Ayer's Cliff, Que.
Mulligan, Claude Aylmer		Maniwaki, Que.
*Mullin, Robert David	28 Devonshire Road	Greenfield Park, Que.
Murray, John William	331 Elm Ave	Westmount, Que.
Murray, Sidney Grosvenor	254 Douglas Ave	St. John, N.B.
*Nichol, Foy Ian	283 Mountain St	Montreal, Que.
Peterson, Fred O	2158 Mance St	Montreal, Que.
Pierce, Sydney David	208 Cote St., Antoine Rd	Westmount Que.
*Pitt, Thomas Josiah		Teignmouth, Devon, England.
*Presner, Jack Copple	1497 St. Urbain St	Montreal, Que.
Rapp, Clarence Theodore	103 Ste. Famille St	Montreal, Que.
*Richardson, Eric Carleton	21 Pine St	Brockville, Ont.
Rivenovich, Louis	310 Colonial Ave	Montreal, Que.
Rohrlich, Louis	1297 Cadieux St	Montreal, Que.
Roper, Herbert Vennor	254 Oliver Ave	Westmount, Que.

*Partial

NAME	STREET ADDRESS	CITY OR TOWN
Rosenstein, Murray	157 East St.	Sault Ste Marie, Ont.
Ross, James Brodie	414 Bourgeois St.	Montreal, Que.
*Ruel, James Rhodes	121 Westmount Blvd.	Westmount, Que.
Rutherford, John Mason (Comm. Course)	14 Lorne Ave.	Montreal, Que.
Schafer, Sydney Louis	26 Drolet St.	Montreal, Que.
Scheffer, Isidor (B.Sc. Course)	83 Rivard St.	Montreal, Que.
Shapira, Joshua (Comm. Course)	780 Notre Dame St., W.	Montreal, Que.
Shaw, George ffolliott Wainwright (Comm. Course)	476 Aylmer St.	Montreal, Que.
Shea, Daniel Francis	226 St. Martin St.	Montreal, Que.
Sherin, John P ayter	Box 518	Lakefield, Ont.
Smith, Frederick McIver (B.Sc. Course)	55 Clandeboye Ave.	Westmount, Que.
Smith, Victor Barry	25 Melbourne Ave.	Westmount, Que.
Stanger, Robert (Comm. Course)	5 Seymour Ave.	Montreal, Que.
Stanway, Albert Edward	14 Arlington Ave.	Westmount, Que.
Steinberg, Benjamin	548 St. Urbain St.	Montreal, Que.
Steine, Ben Zion	819 University St.	Montreal, Que.
*Vey, Walter		St. John's, Nfld.
Webster, Gordon Morley	478 Roslyn Ave.	Westmount, Que.
Webster, John Clarence (B.Sc. Course)		Shediac, N.B.
Werry, Wilfrid Watson	650 Laval Ave.	Montreal, Que.
Wheatley, Rupert Adams (B.Sc. Course)	657 Belmont Ave.	Westmount, Que.
Whitmore, Cecil Humphrey		Maxville, Ont.
Willis, Irwin Davidson	145 Mansfield St.	Montreal, Que.
Wolepor, Benjamin (B. Sc.Course)	68, 7th Ave.	Lachine, Que.
Zuckerman, Joshua (B. Sc. Course)	133 Rachel St. E.	Montreal, Que.

(Royal Victoria College)

Alexander, Katherine Newell	176 Hughson St., S.	Hamilton, Ont.
*Ayer, Ruth Claxton	343 Oliver Ave.	Westmount, Que.
*Aylen, Lois	274 O'Connor St.	Ottawa, Ont.
Bagley, Evelyn	446 Lansdowne Ave.	Westmount, Que.
Ballantyne, Elizabeth Gordon	124 Ballantyne Ave, S.	Montreal W., Que.
Banfill, Mary Evelyn Sarah		East Angus, Que.
Birkett, Winifred Leighton	252 Mountain St.	Montreal, Que.
Brooke, Minette	1397a St. Dominique St.	Montreal, Que.
Brown, Francis Trapp	P. O. Box 168,	Kamloops, B.C.
Cross, Dorothy Alexandra	40 Quinn Ave.	Longueuil, Que.
Dougall, Greta Ethel (Comm. Course)	1098 Greene Ave.	Westmount, Que.
Foley, Violet Elizabeth	Loch Lomond Road	St. John, N.B.
Fry, Mary Inez	29 Bellevue Ave.	Westmount, Que.
Gillies, Helen Mackechnie	205 Mance St.	Montreal, Que.
Goldman, Raya Edna	615 Bloomfield Ave.	Outremont, Que.
Henderson, Jean Tasker	575 Roslyn Ave.	Westmount, Que.
Hibbard, Gladys Evadne (B. Sc. Course)	460 Argyle Ave.	Westmount, Que.
Holloway, Marjorie	2802 Park Ave.	Montreal, Que.
Howell, Muriel Jillard	212 Metcalfe Ave.	Westmount, Que.
James, Norah Gertrude	99 Durocher St.	Montreal, Que.
Joseph, Rose	236 Elm Ave.	Westmount, Que.

*Partial

NAME	STREET ADDRESS	CITY OR TOWN
Klineberg, Adele	917 St. Denis St.	Montreal, Que.
Laurin, Alice	R.R. No. 1	Lachute Que.
Levy, Lisa (B.Sc. Course)	27 South Camp Rd	Kingston, Jamica.
*McClure, Frances Stephen	2 Grant St.	Longueul, Que.
McDonald, Anita Cecelia	201 Agnes St.	New Westminster, B.C.
McGoun, Isabella W.	37 Bellevue Ave	Westmount, Que.
McPartlin, Elizabeth	7 Woodstock Ave	Montreal, Que.
MacRae, Dorothy	245 Melville Ave.	Westmount, Que.
MacRae, Shirley Edythe		Cookshire, Que.
Mansfield, Eleanor	546 Grosvenor Ave	Westmount, Que.
Martin, Alice Frances	760a De l'Epee Ave	Outremont, Que.
*Mathewson, Dorothy Ruth	112 Ste. Famille St.	Montrea, Que.
Medbury, Dorothy Durfee	21 Edgehill Rd	Montrea, Que.
Millen, Laura Isobel (B. Sc. Course)	418 Wood Ave	Westmount, Que.
Palmer, Edna May	Box 669	Sherbrooke, Que.
*Paterson, Ailsa	336 Mountain St.	Montreal, Que.
Patton, Eunice Irene		Ormstown, Que.
Perry, Millicent A.	85 Brydges St	Moncton N.B.
*Price, Laura Willard	475 Roslyn Ave.	Westmount, Que.
Reid, Janet Lilian		Lemesurer, Que.
Riley, Margaret Louise	1302 8th Ave N.W.	Calgary, Alta.
Rogers, Lillian Elizabeth	1333 Verdun Ave	Verdun, Que.
Rough, Thelma Margaret	2236 Park Ave.	Montreal, Que.
Sharples, Doris Kathleen	"Birchcote," St. Foye Rd.	Quebec, Que.
Shatford, Ruth Marion	697 St. Catherine St. W.	Montreal Que.
Smith, Alice Victoria		Little Metis Beach, Que.
Tait, Marjorie Jean		St. Laurnt, Que.
Teggart, Dorothy May	128 Stanley St.	Montreal Que.
Tuffy, Magdalen Ellen		Cobden, Ont.
Weibel, Louise Esther	35 Souvenir Ave	Montreal Que.
*Wilson, Barbara	725 Upper Belmont Ave	Westmount, Que.
Wilson, Catharine Robertson (B. Sc. Course)	188 King St. E.	St. John, N.B.
Wilson, Helen Cushing	21 Queen Sq	St. John, N.B.
Zealand, Vivien Lewis		Houghton, Mich., U.S.A.

SECOND YEAR

(McGill College)

Armstrong, Francis Edwin		Shawville, Que.
Badian, Alan Maurice (Comm. Course)	2210 St. Urbain St.	Montreal Que.
Bockar, Alexander (Comm. Course)	4041 Dorchester St.	Westmount, Que.
Borden, Henry		Grand Pré, N.S.
Boyce, J. Clifford	317, 11th Ave. E.	Calgary, Alta.
Breitman, Reuben	186 St. Timothée St.	Montreal Que.
†Center, Ervin Alfred	R.R. No. 2,	Lachute.
*Clayton, G. Miller	129 Sherbrooke St. E.	Montreal Que.
*Coleman, Stanley Harold		Caughnavaga, Que.
Curtis, Gilbert Spurgeon		Blackhead, Nfld.
Echenberg, Henry Lehrer	58 Souvenir Ave	Montreal, Que.
*Frank, Moses	1545 Clarke St.	Montreal Que.
Franklin, Michael Harry	2675 Notre Dame St.	Montreal, Que.
†Freedman, Joseph (B. Sc. Course)	93 Sixth Ave	Lachine, Que.

*Partial. †Double Course.

NAME	STREET ADDRESS	CITY OR TOWN
*Gauvin, Leo Bertram	988 St. Hubert St.	Montreal, Que.
Glickman, Bernard (Comm. Course)	328 Redfern Ave	Westmount, Que.
Hebert, Chas Pierre	11 Macgregor St.	Montreal, Que.
Hooper, Willi Mathieu		Brownsburg, Que.
Johnson, Arthur Wood (Comm. Course)	Leslie St.	St. John's, Nfld.
†Kay, Edwin (B. Sc. Course)	637 St. André St.	Montreal, Que.
Kern, Louis Valter	63 Fairford St. E.	Moose Jaw, Sask.
Kern, Marshal James	63 Fairford St. E.	Moose Jaw, Sask.
Levitt, Moses (Comm. Course)	149 Huchison St.	Montreal, Que.
MacDonald, Jinley Murdoch (Comm. Course)		Spring Hill, Que.
McEwen, Keih M.		Maxville, Glengarry Co., Ont.
McIntosh, Clarence Alexander	43 Park Ave	Ottawa, Ont.
Mann, Melvill Staveley	71 Prospect St	Westmount, Que.
*Marsh, Alfrel Finnis		Birmingham, England
†Mirsky, Samuel (B. Sc. Course)	359 Cumberland St	Ottawa, Ont.
*Morrison, Donald R.		Marsboro, Que.
*Newnham, Iertram Edwin		Damascus, Ont.
Pratt, Willian Frederick White	399 Clarke Ave	Westmount, Que.
Rabinovitch, Boaz (B. Sc. Course)	213 Laval Ave	Montreal, Que.
†Rabinovitch Jacob (B. Sc. Course)	213 Laval Ave	Montreal, Que.
Raphael, Max Isaac	151 Drolet St.	Montreal, Que.
Reford, Lewi Eric	300 Drummond St.	Montreal, Que.
Reid, Howard Edward		Granville Ferry, N.S.
Rountree, John Leonard	445 Mt. Stephen Ave	Westmount, Que.
Rowat, Harlnd Cameron		Athelstan, Que.
Savage, Josem Clifford	37 Murray Ave	St. Lambert, Que.
Schleifstein, Bs. Isaac	1049 St. Urbain St	Montreal, Que.
*Servage, Havey Maxwell		Dunbar, Ont.
Shapira, Willim (Comm. Course)	780 Notre Dame St. W.	Montreal, Que.
Sperber, Lionl Albert	330 Laval Ave	Montreal, Que.
Teitelbaum, Iichael	95 St. Elizabeth St.	Montreal, Que.
Vineberg, Norman M.	1518 Mance St	Montreal, Que.
*Wetstein, Harris	306 Grosvenor Ave	Westmount, Que.
(Royal Victoria College)		
*Allen Ada E		Petitcodiac, N.B.
*Anderson, Gadys Pomercy	21 Highland Ave	Montreal, Que.
*Aylen, Dorohea Elisabeth	274 O'Connor St	Ottawa, Ont.
*Barnard, Bstrice Evelyn	536 Grosvenor Ave	Westmount, Que.
Barnes, DorisScoullar	La Tour Apartments	St. John, N.B.
Barnes, Edith Louise	P.O. Box 44	St. John, N.B.
Bishop, Haze Martha		Bishop's Crossing, Que.
Cameron, Katherine Locke	25 Grey Ave	N.D. de Grace, Que.
Campbell, Sarah Doris		Lachute, Que.
Cockfield, Hden Reid		Lac Charlebois, Que.
Contant, Rebcca Amy	30 Ste. Famille St	Montreal, Que.
Craig, Ruth Iyke	738 St. Urbain St	Montreal, Que.
Davidson, Winifred Hazel	748 Decarie Blvd	Montreal, Que
Deery, Margret Jean Henderson	85 Hutchison St	Montreal, Que.

*Partia. †Double Course.

NAME	STREET ADDRESS	CITY OR TOWN
*Fitzsimons, Anna Florence	734 Rockland Ave	Outremont, Que.
Ford, Constance		Portneuf Stn., Que.
Foster, Mary Winnifred	629 Victoria Ave	Westmount, Que.
Garrow, Muriel Wilma	289 Mountain St	Montreal, Que.
Gillepsie, Kate Menzies	164 Albert St	London, Ont.
Godwin, Kathleen Frances		Ste. Anne de Bellevue, Que.
*Gray, Agnes Edith May	976 Tupper St	Montreal, Que.
Harvey, Constance Muriel	55 Chesterfield Ave	Westmount, Que.
Hemming, Clarissa, B.Sc.	Apt. 7, 24 Durocher St	Montreal, Que.
*Hibbard, Margaret Eleanor	460 Argyle Ave	Westmount, Que.
Higginson, Helen Magee		Buckingham, Que.
Hill, Isabel Marion Eleanor		Richmond, Que.
Holland, Ethelwyn Jamieson	2195 Waverley St	Montreal, Que.
Husk, Ruth Joy Esther		Ulverton, Que.
Irwin, Chloris Constance (B.Sc. Course)	631 Victoria Ave	Westmount, Que.
Larkin, Beatrice J		Seaforth, Ont.
Lewis, Esther Eileen	105, 44th Ave	Lachine, Que.
*Logan, Catherine Belore	382 Claremont Ave	Montreal, Que.
Louis, Goldie Olga	39 Prince Arthur St	Montreal, Que.
*McCaig, Jean Elizabeth	679 St. Paul St. W.	Montreal, Que.
Macdiarmid, Margaret L.	36 Chomedy St	Montreal, Que.
MacIntosh, Hope	220 Hutchison St	Montreal, Que.
McPherson, Anna Isobel	14 Fenwick Ave	Montreal West, Que.
Mills, Gladys Alexandra		Ormstown, Que.
*Picard, Marie Antoinette	198 George Etienne, Cartier Square	Montreal, Que.
Reid, Regina Victoria	104 Prud'homme Ave	Montreal, Que.
Robson, Jean Hay	321 Dromore Ave	Winnipeg, Man.
Ross, Eva Helen		Montreal, Que.
Sharples, Alice Murray	"Birchcote," St. Foye Rd.	Quebec City, Que.
Silverman, Malca	753a City Hall Ave	Montreal, Que.
Simon, Beatrice Vina	51 Mullin St	Montreal, Que.
Snyder, Evelyn Alice	632 Victoria Ave	St. Lambert, Que.
Spier, Janie Dickson	4015 Dorchester St	Westmount, Que.
Thornton, Jessie Muriel	147 Grey Ave	Montreal, Que.
*Willis, Francis Dorothy, B.A.	145 Mansfield St	Montreal, Que.
Willson, Reta Ethel	2234 Park Ave	Montreal, Que.

THIRD YEAR

(McGill College)

Adair, Cyril Harris	549 Lansdowne Ave	Westmount, Que.
*Allen, Harold D.	33 Milton St	Montreal, Que.
*Bourke, George W., B.A.	42 Lorne Ave	Montreal, Que.
†Boveler, Harry Alexander	231 St. Lawrence Blvd	Montreal, Que.
*le Lotbiniere, Alain Joly	591 Pine Ave. W.	Montreal, Que.
*Demaray, John Franklin		Forest, Ont.
DiFlorio, Pasquale		S. Pietro in Fine, Italy
Duncan, William Leslie	110 Notre Dame Ave	St. Lambert, Que.
†Evans, Otty Blair		St. John, N.B.
Floran, Herbert Paul	733 Outremont Ave	Outremont, Que.
Freedman, Lewis Kellert	86 Park Ave	Montreal, Que.
†Freedma , Newman Barnett (B. Sc. Course)	86 Park Ave	Montreal, Que.
Galley, John Vessot (B. Sc. Course)		Pakenham, Ont.
†Knowlton, Henry Corey		Guilford, Me., U.S.A.
†McClure, James Carswell		Lachute, Que.

*Partial. †Double Course.

Name	Street Address	City or Town
*McGlaughlin, Wm. Robert	22 Burton Ave.	Westmount, Que.
†Murray, William Alex.		Brownsburg, Que.
*Neumann, Harold	4927 Sherbrooke St.	Westmount, Que.
O'Brien, John Lewis.	4130 Dorchester St.	Westmount, Que.
†Petersen, James Norman. (B. Sc. Course.)	1214a Des Erables St.	Montreal, Que.
Peterson, Norman Edwin.	809 St. Denis St.	Montreal, Que.
Phillips, Otto Bernard. (B.Sc. Course)	281 Whitney Ave.	Sydney, N.S.
*Popliger, Israel Alex.	734 Shuter St.	Montreal, Que.
†Rubin, Saul. (B. Sc. Course)	182 St. Margaret St.	Montreal, Que.
Shaw, Thomas Patton Gladstone. (B. Sc. Course)	1022 Dorchester St.W.	Montreal, Que.
†Silver, Philip George. (B. Sc. Course)	459 Mount Pleasant Ave.	Westmount, Que.
†Somerville, Wallace Bertram.		Bristol, N.B.
*Taylor, Arthur James.	3405 Christophe Colomb St.	Montreal, Que.
Townshend, Cecil Wray.		Wolfville, N.S.
Wiseman, Solomon.	707 Cadieux St.	Montreal, Que.
	(Royal Victoria College)	
Charlton, Dorothy Kathleen. (B. Sc. Course)	391 Wiseman Ave.	Outremont, Que.
Dart, Jennie Doris	123 Edison Ave.	St. Lambert, Que.
Davidson, Gertrude Hazel	694 Victoria Ave.	Westmount, Que.
*Dewey, Dorothy Marion.	60 Chesterfield Ave.	Westmount, Que.
*Ditchfield, Mary Elizabeth	640 Grosvenor Ave.	Westmount, Que.
Ewing, Gwendolyn Gordon.	84 Duke St	St. John. N.B.
Ford, Katherine McLaren.		Portneuf Stn, Que.
Goddard, Mabel Alice.	129 Querbes Ave.	Outremont, Que.
*Goodman, Clara Annie.		Campbellton, N.B.
Henry, Edith F.	60 Arlington Ave.	Westmount, Que.
Hill, Eleanor Marguerite.	768 St. Catherine Rd.	Outremont, Que.
Imrie, Isabelle May.	364 Olivier Ave.	Westmount, Que.
McDougall, Marguerite.		Victoria, B.C.
MacKinnon, Flora Janet.		Kimberley, Que.
McMillan, Hazel	4257 Avenue Rd	Westmount, Que.
McMillan, Myrtle	4257 Avenue Rd	Westmount, Que.
Mawdsley, Mary Dorothy		Clemens, Alta.
Meyer, Bertha	6 Hudson Ave	Westmount, Que.
Moody, Mary Grace Holland	97 Ash St	Winnipeg, Man.
Moule, Dorothy Edith		Ste. Anne de Bellevue Que.
Nichol, Helen Richards H.	110 Columbia Ave	Westmount, Que.
Nichol, Jean	110 Columbia Ave	Westmount, Que.
Novick, Fannie	1799 St. Urbain St	Montreal, Que.
Reid, Jean		Granville Ferry, N.S.
Rorke, Emily Christine	1979 Hutchison St.	Montreal, Que.
Roston, Lucille R.	4444 Sherbrooke St	Westmount, Que.
Savage, Queenie	20 Highland Ave.	Montreal, Que.
Scott, Irene Elizabeth		Lachute, Que.
Wall, Eileen Mary	538 LaSalle Road	Verdun, Que.
Wilson, Alice Elizabeth	24 Dominion Ave	Sherbrooke, Que,

*Partial. †Double Course.

FOURTH YEAR

(McGill College)

NAME	STREET ADDRESS	CITY OR TOWN
Barlow, William Darrach (B. Sc. Course)	20 Vendome Ave	Montreal, Que.
*Beattie, John Donald, M.B., B.A.	309 Stanley St	Montreal, Que.
Booker, Hanford Karl		Devon, York Co. N.B.
†Brandes, Emmanuel	770 Clarke St	Montreal, Que.
†Davis, Aaron	32 Notre Dame St	Lachine, Que.
Dobell, Francis Curzon	Peter St	Quebec City, Que.
Donald, Frederick Cecil (B. Sc. Course)	318 Lagauchetiere St. W.	Montreal, Que.
†Fitzgerald, Ralph Richard (B. Sc. Course)	601, 20th Ave. W	Calgary, Alta.
†Goldwater, Ephraim	201 St. Joseph St	Lachine, Que.
†Golt, Moses Israel	1185 St. Lawrence Blvd	Montreal, Que.
Grier, James		Ramelton, Ireland.
Harold, Joseph James	344 Mountain St	Montreal, Que.
Harris, Hugh Reford Dale	263 MacLaren St	Ottawa, Ont.
Holtham, Bartley Nelson		Waterville, Que.
*James, Clarke B., B.A.	364 Beaconsfield Ave	Montreal, Que.
Klineberg, Otto	917 St. Denis St	Montreal, Que.
Lalanne, James Arthur	Box 73	Brownsburg, Que.
Levy, John	3 Centre St	Montreal, Que.
†Lipsey, Hyman	66 Bruce Ave	Westmount, Que.
MacGibbon, Archibald Douglas		Lachute, Que.
McRae, Roderick Alex		Vankleek Hill, Ont.
Mergler, Joseph Konrad	198 Ontario St. E	Montreal, Que.
†Mills, Edward S. (B. Sc. Course)		Ormstown, Que.
Nicoll, Howard		Lachute, Que.
Noad, Algy Smillie	Apt. 18, 223 Sherbrooke St. W.	Montreal, Que
Ritchie, John Robert		Aylmer, Que.
†Rothschild, David (B. Sc. Course)	323 Grosvenor Ave	Westmount, Que.
Smart, R. A. Grant	61, 34th Ave	Lachine, Que.
Smith, Arthur Ives	162 Hampton Ave	Montreal, Que.
Stuart, Albert William		Napierville, Que.
Towers, Graham Ford (B. Sc. Course)	77 St. Mark St	Montreal, Que.
†Usher, Barney David	970 Tupper St	Montreal, Que.
Younger, George Robert	135 Clandeboye Ave	Westmount, Que.

(Royal Victoria College)

Abbott, Elizabeth Edith		Senneville, Que.
Baker, Edith Bertha	453 Mt. Stephen Ave	Westmount, Que.
Banfill, Gladys Maud		East Angus, Que.
Basnar, Florence Ella		Lyndonville, Vt. U.S.A
Boyd, Bernice Eleanor	4253 Dorchester St	Westmount, Que.
Cameron, Sarah Symonds	62 Charlotte St	Sydney, N.S.
Craig, Gwyneth Louise	98 Westmount Blvd	Westmount, Que.
Cruikshank, Norma Leslie	219 W. Main St	Hamilton, Ont.
Dougall, Dorothy Webster	1098 Greene Ave	Westmount, Que.
Fritz, Madeline Alberta	179 Winslow St	St. John West, N.B.
Gibbs, Mary (B. Sc. Course)		Buckingham, Que.
Giles, Lila Foreman		Lachute, Que.
Graham, Elsie		North Bay, Ont.
Grindley, Fannie Madeline	Apt. 3, 500 Guy St	Montreal, Que.

*Partial. †Double Course.

NAME	STREET ADDRESS	CITY OR TOWN
Hague, Helen Sarah	772 Dorchester St. W.	Montreal, Que.
Lewis, Doris Ethel	105, 44th Ave.	Lachine, Que.
Lindsay, Marion Kathleen		Montpelier, Vt., USA.
Livingstone, Sara Gladys	959 Tupper St.	Montreal, Que.
Macdonald, Isabella Louise	201 Tribune Building	Winnipeg, Man.
McGregor, Phebe Lewis	336, 11th Ave. W.	Vancouver, B.C.
MacLennan, Agnes Helen Bryans (B. Sc. Course)	Apt.9, Berthelet Apts. 222 Ontario Avenue	Montreal, Que.
Mitchell, Beatrice Minerva	Charny	Levis Co., Que.
Monk, Elizabeth Carmichael	1050 Tupper St.	Montreal, Que.
Morgan, Nora Susan F.	370 Wood Ave.	Westmount, Que.
Paterson-Smyth, Jessie Alice	St. George's Rectory	Montreal, Que.
Pickel, Margaret Barnard		Cowansville, Que.
*Reeve, Marjorie Frieda	284 de l'Epée Ave.	Outremont, Que.
Reid, Isabel Elizabeth	330 Old Orchard Ave.	Montreal, Que.
Rogers, Ruth		Patten, Me., U.S.A.
Salomon, Ruth	179 Esplanade Ave.	Montreal, Que.
Swindlehurst, Ellen Louise	350, 3rd Ave., Rosemount.	Montreal, Que.
Wright, Annie Ethel	565 Roslyn Ave.	Westmount, Que.
Young, Marion Thompson	18 St. Anne St.	Quebec, Que.

DEPARTMENT OF MUSIC.

PROCEEDING TO THE DEGREE OF MUS. BAC.

FIRST YEAR

Aylen, Dorothea
Aylen, Lois
MacDonald, Flora

SECOND YEAR

Katz, Edward
MacKenzie, Lillian

THIRD YEAR

Oughtred, Eleanor
Walker, Mrs. Ella

PROCEEDING TO THE DIPLOMA OF LICENTIATE IN MUSIC

FIRST YEAR

Benoit, Viola
Black, Dora
Cox, Eleanor
Durieux, .
Fletcher, Marion
Miller, Anna
Shapiro, Evelyn
Toker, Rebecca

*Partial.

SECOND YEAR

Burrell, Irene
Kofman, Rose
Young, Abigail

THIRD YEAR

Anderson, Harold V.
Birkett, Winifred
Campbell, Olive
Cook, Audrey
Hoffman, Hazel
Lord, Dorothy P.
Newton, Mrs. R.
Pena, Irene
Ramage, Annie

SENIOR PARTIAL STUDENTS

Adcock, M.
Angus, Phyllis
Asner, Esther
Aveline, Marie
Bennett, Margaret
Blachford, Marjorie
Boyd, V.
Brais, C.
Brewster, C.
Buck, Ruth
Cnipps, I.
Cole, Matilda
Coles, J.
Cook, Sara
Dadmun, E.
D'Amour, Renée
Drysdale, Ellen A.
Elsy, Edna
Fetherston, Hazel
Flett, Ruth
Fowler, Doris
Frank, Esther
Fulkerson, Mrs. E.
Gagnon, Irene
Gittleson, Gertrude
Graham, Mrs. R.
Guilaroff, Olga
Herrick, Mrs. E. R.
Hewlings, C. A.
Hibbard, O.
Hogg, Helen
Howard, Marguerite
Isard, Mrs. F. S.
Jaillet, Mary
Jameson, Natalie
Johnson, Edith M.
Jones, L. S.
Jones, Nellie
Jones, W.
Kahan, Tamara
Kingan, M.
Leach, Hazel R.
Lipsey, Sadie
Lutton, Dorothy
McCallum, Mary
MacLaren, Elizabeth
Mace, R.
Mallinson, Mrs. E. C.
Marks, Annie
Marks, Bernard
Miller, Freda
Mills, Evelyn
Milston, S.
Molson, C. J.
Monohan, L.
Neumann, Grace
Nix, Anna L.
Norris, Gwendolyn
Ogilvie, Marion
Palmer, Adele
Parker, Phoebe
Percival, Lillian
Percival, Muriel
Phelps, Roberta
Pinsler, Etta
Rose, Rosalie
Rothschild, David
Sherrard, E.
Silcock, Marjorie
Smallpiece, Alice
Smith, Edna H.
Stott, Doris
Stuart, Eleanor
Thom, Llllian
Watson, Nora
Wood, D.
Wozniac, M.

FACULTY OF APPLIED SCIENCE.

FIRST YEAR

NAME	STREET ADDRESS	CITY OR TOWN
Anderson, Dan	289 Richmond St	Charlottetown, P.E.I.
Armstrong, Lawrence Henry	845 Oxenden Ave	Montreal, Que.
Banfill, Harry Leroy		Richmond, Que.
Bastable, Ross Waller	96, 44th Ave	Lachine, Que.
Bimson, Norman	444 Willibrord's Ave	Verdun, Que.
Bonneville, Sydney		Woodroffe, Ont.
Boronow, Paul	469 Victoria Ave	Westmount, Que.
Bradfield, John Ross		Morrisburg, Ont.
Brooks, John Kenneth	110 St. Mark St	Montreal, Que.
Brown, Edmund Vere	12 Kingsway	Winnipeg, Man.
Brown, George Basil	614 Sherbrooke St. W	Montreal, Que.
Brown, Lawrence Elliott (Arch.)		Ottawa, Ont.
Brownstone, Samuel Louis		Herbert, Sask.
Buchanan, John Edmund	43 St. Mark St	Montreal, Que.
Carlyle, Arthur William	The Roxborough	Ottawa, Ont.
Carson, Cecil Edward	465 Strathcona Ave	Westmount, Que.
Chorney, Melvin Mendel	994 Cadieux St	Montreal, Que.
Clark, George Silas	R.M.D. 6	Lachute, Que.
Clarke, Edward Lawrence	10 Kinkora Ave	Montreal, Que.
Cohen, Joseph		Ottawa, Ont.
Cousineau, Charles A.	2733a Drolet St	Montreal, Que.
Davis, Sydney Herbert	157 Pretoria Ave	Ottawa, Ont.
Dawes, Richard Jeffrey	731 Sherbrooke St. W	Montreal, Que.
Denis, Jean Louis Joseph	1050 St. Viateur Ave	Outremont, Que.
Dineen, Matthew Henry	460 St. Antoine St	Montreal, Que.
Dobson, Robert Munro	51 Nelson Ave	Outremont, Que.
Drummond, Ross Newton	2695 Rosemount Blvd	Montreal, Que.
Eager, Norman Herbert Aldwyn	4628 St. Catherine St	Westmount, Que.
Echlin, Edward McVicar	196 Elgin St	Ottawa, Ont.
Evans, William	791 University St	Montreal, Que.
Falconer, William Alex	4447 St. Catherine St	Westmount, Que.
Fisk, George Harold	166 Drummond St	Montreal, Que.
Friedman, Victor Edward	322 Elm Ave	Westmount, Que.
Fry, John Dawson	66 McTavish St	Montreal, Que.
Gaboury, Maurice Albert	324a St. Catherine St. W	Montreal, Que.
Gamble, James Kellard	394 Wellington St	Ottawa, Ont.
Glen, Alexander Fulton		Ste. Agathe des Monts, Que.
Gnaedinger, Adrian Leslie	465 Lansdowne Ave	Westmount, Que.
Gnaedinger, Paul Ernest	4170 Dorchester St. W	Montreal, Que.
Grant, Ralph Glencoe	73 Ash Ave	Montreal, Que.
Gurman, Israel I. T.	84 St. Maurice St	Montreal, Que.
Hague, Harry McLeod	772 Dorchester St. W	Montreal, Que.
Harling, Frank Norman	205 Westmount Blvd	Westmount, Que.
Harwood, Roderick A. de Lotbiniere	162 Hutchison St	Montreal, Que.
Hepburn, Donald Oliver	35 Nile St	Stratford, Ont.
Holcomb, Harcourt Edward		Ste. Anne de Bellevue Que.
Humes, Harold Louis	4288 Western Ave	Westmount, Que.
Jenks, William Stuart	42 Edward St	Halifax, N.S.
Johnson, Edwin Lewis		Brownsburg, Que.
Kerr, George Elliott		Fernie, B.C.
Kirsh, Harry	400 West Hill Ave	Montreal, Que.
Kyle, Donald Gordon	2586 Park Ave	Montreal, Que.
Leitch, Hugh James	476 Strathcona Ave	Westmount, Que.
Loebel, John Mayer	3 St. Matthew St	Montreal, Que.

Name	Street Address	City or Town
Luke, Morley Corbus (Arch.)	41 Brock Ave. N.	Montreal West, Que.
Lyall, Douglas Creswell	18 MacGregor St.	Montreal, Que.
McCallum, Fred. Lee	215 Division St.	Welland, Ont.
McInnis, Joseph	168 Grand Blvd.	Montreal, Que.
Mackenzie, George Home	4561 Walnut St.	Kansas City, Mo., U.S.A.
MacNider, Clarence Henry	38 Burton Ave.	Westmount, Que.
Macoun, John Macoun	Experimental Farm	Ottawa, Ont.
Macrae, Donald	245 Melville Ave.	Westmount, Que.
Martin, Kenneth Beriah	407 Metcalfe Ave.	Westmount, Que.
Massue, Gustave Drolet	173 St. Joseph Blvd.	Outremont, Que.
Messenger, William Aubrey	15 Tower Ave.	Montreal, Que.
Midgley, Russell Edward	113 Northcliffe Ave.	Montreal, Que.
Mitchell, James Murray	4630 St. Catherine St.	Westmount, Que.
Morin, Charles Auguste	2719 Christophe Colomb St.	Montreal, Que.
Morris, Robert Schofield (Arch.)	264 McNab St. S.	Hamilton, Ont.
Morrison, David Reid	26 Somerville Ave.	Westmount, Que.
Munn, Wilfred Lockerby	4273 Dorchester St.	Westmount, Que.
Munro, William Cauldwell	251 Wilson Ave.	Montreal, Que.
Murphy, Alex. Gordon Silcox	620 Victoria Ave.	Westmount, Que.
Murphy, Edward Justin	366 Fifth Ave.	New York City
Nesbitt, Martin Becerra		Urique, Chihuahua, Mexico
Newman, Percy Cecil		Ville La Salle, Que.
Notman, James Geoffrey	4193 Avenue Road	Westmount, Que.
Perry, Alfred Leslie (Arch.)	280 Addington Ave.	Montreal, Que.
Quaile, Thos. Edward Henry		River Desert, Que.
Quinlan, James T.	323 Redfern Ave.	Westmount, Que.
Rankin, William Donald	280 Main St.	Woodstock, N.B.
Reid, Eric Arnold	330 Old Orchard Ave.	Montreal, Que.
*Renouf, Edward Trudeau	718 Pine Ave. W.	Montreal, Que.
Root, Stephen Eastman	4219 Western Ave.	Westmount, Que.
Ross, David Roy		Truro, N.S.
St. Germain, Paul	75 Park Ave.	Montreal, Que.
Schleifstein, Montague Lawrence	1049 St. Urbain St.	Montreal, Que.
Scott, Paul Stuart	14 Seymour Ave.	Montreal, Que.
Senay, Jos. Napoleon Reny	102 Maisonneuve Ave.	Quebec City, Que.
Sherrard, Edwin Atwater	1 Forden Ave.	Westmount, Que.
Simons, John Joseph		Michel, B.C.
Tatley, David Lambert	49 Belvedere Rd.	Montreal, Que.
Taylor, Edward Plunket	201 Augusta St.	Ottawa, Ont.
Taylor, John Fred. Rowan	278 Colonial Ave.	Montreal, Que.
Thompson, Cecil Elmer	157 Frank St.	Ottawa, Ont.
Tittensor, Gordon Mabson	20 W. 109th St.	New York City
Todd, Arthur Alison	242 Drummond St.	Montreal, Que.
Turley, Gerald Aloysius		Frankford, Ont.
Turnbull, Rupert Davidson		Rothesay, N.B.
Turton, Victor Herbert	594 Lansdowne Ave.	Westmount, Que.
Wain, Eric James	42 St. Denis Ave.	St. Lambert, Que.
Wait, Eric Holloway	319 Prince Arthur St. W.	Montreal, Que.
Watt, Leslie Alexander (Arch.)		St. Anne de Bellevue, Que.
Weinstein, Charles	1659 St. Lawrence Blvd.	Montreal, Que.
Weldon, Thomas Herbert	636 Dorchester St. W.	Montreal, Que.
White, Richard Edward	437 Cooper St.	Ottawa, Ont.
Wilder, Hartland Bates	680 Roslyn Ave.	Westmount, Que.
Williams, Archibald Lyle	300 Prince Arthur St. W.	Montreal, Que.
Williams, Frederic Wayland	113 Stanley Ave.	St. Lambert, Que.
Wonham, Walter Richard	336 Wood Ave.	Westmount, Que.
Wright, Stanley Weir	435 Elm Ave.	Westmount, Que.

SECOND YEAR

Name	Street Address	City or Town
*Acton, Harold Joseph	4837 St. Catherine St	Westmount, Que.
Bain, George William		Lachute, Que.
Benson, William Davenport	15 Ontario Ave	Montreal, Que.
Bethune, John Strachan Talbot	627 Dorchester St. W	Montreal, Que.
Binmore, George Bedell	47 Kelvin Ave	Outremont, Que.
†Brandes, Emmanuel	770 Clarke St	Montreal, Que.
Brault, Paul George Adrien	405 Durocher Ave	Outremont, Que.
Brow, James Barrett	88 Upper Prince St	Charlottetown, P.E.I.
Canning, Dow Vernon	448 Claremont Ave	Westmount, Que.
Challenger, Jas. Othneil		Basseterre, St. Kitts, B.W.I.
Cromwe l, Alexander Ross		Cookshire, Que.
Cuddy, John Michael	269 Mance St	Montreal, Que.
Elliot, Gerald Burton	385 Lansdowne Ave	Westmount, Que.
Forbes, K	807 Shuter St	Montreal, Que.
Fortin, Gaston Lalonde	191 Mance St	Montreal, Que.
Gardner, John George	108 St. Matthew St	Montreal, Que.
Gauthier, Paul Gilles	484 Bloomfield Ave	Outremont, Que.
Gibbs, John Hodgson		Buckingham, Que.
Gliddon, W. G. Claude	430 Nelson St	Ottawa, Ont.
Grout, George Dixon Bouchier	280 Gladstone Ave	Ottawa, Ont.
Gualtieri, Santo		Thorold, Ont.
Hamilton, Herbert James	421 Metcalfe Ave	Westmount, Que.
Henderson, Conway H. D	52 Rosemount Ave	Westmount, Que.
Hill, Stanley C.H		Richmond, Que.
Hyndman, Edward Douglas	45 Montreal St	Sherbrooke, Que.
Jackson, Carl Henry	2127 Mance St	Montreal, Que.
Jordan, Herbert Scott	446 Mt. Stephen Ave	Westmount, Que.
Kay, Stuart E	41 Lorne Ave	Montreal, Que.
Kennedy, Charles Laurence		Parkdale, Man.
Leo, Louis Maitland	437 Argyle Ave	Westmount, Que.
Livingstone, Kenneth Mackay	1249 Kenyon St. N.W	Washington, D.C.
Macfarlane, Donald Henry	36 Melbourne St	Sherbrooke, Que.
Mackenzie, Donald Gordon	1012 Dorchester St. W	Montreal, Que.
Maxwell, Edward Blythe	312 Peel St	Montreal, Que.
Muir, Wilson James	386 Roslyn Ave	Westmount, Que.
O'Halloran, James	408 Queen St	Ottawa, Ont.
O'Sullivan, Louis	197 Mance St	Montreal, Que.
Patterson, Kenneth Breck	4222 Dorchester St	Westmount, Que.
Perriton, Douglas Eric	373 Grosvenor Ave	Westmount, Que.
Phelan, Thomas Enslow	338 Kensington Ave	Westmount, Que.
Salamis, Basil		Leka, Samos, Greece.
Seabright, John Elbert	1747 Rosedale Ave	East Cleveland, Ohio, U.S.A.
Shotwell, John Stewart G	68 Somerset St. W	Ottawa, Ont.
Stroud, William Dicker	18 St. Matthew St	Montreal, Que.
Tansley, Wilfred	46 Mecklenburg St	St. John, N.B.
Timmerman, Everett Drinkwater	260 Bishop St	Montreal, Que.
Van Etten, Fred Bouton	156 Wall St	Kingston, N.Y., U.S.A.
Voyinovitch, Vookosa J	Church House	Three Rivers, Que.
Ward, Melville Ernest St. Clair	52 Clergy St	Kingston, Ont.
Winslow, Kenelm Molson	136 Middlegate	Winnipeg, Man.
Yates, Christopher Montagu	Ritz-Carlton Hotel	Montreal, Que.

THIRD YEAR

*Allen, Harold D	33 Milton St	Montreal, Que.
*Biggar, Louis Hodgins	738 Pine Ave W	Montreal, Que.
Bourret, Paul	529 St. Urbain St	Montreal, Que.

*Partial.

NAME	STREET ADDRESS	CITY OR TOWN
Bradley, Herbert Ellison		Smith's Falls, Ont.
Cloutier, George Edwin Joseph	2339 Park Ave	Montreal, Que.
Creighton, Charles Pearse	38 Royal Ave	New Westminster, B.C.
Cross, Gordon E.	627 Berri St	Montreal, Que.
Crowe, Cyril Holesworth		Stewiacke, N.S.
Deneau, Gaston	1869 Chateaubriand Ave	Montreal, Que.
Dunbar, John Robert	332 Somerset St	Ottawa, Ont.
Durnford, Alex. Tilloch Galt (Arch.)	9 Simpson St	Montreal, Que.
Edwards, Gordon Maxwell Meighen	55 McKay St	Ottawa, Ont.
Elder, John Campbell	108 Strathearn Ave	Montreal West, Que.
Erlenborn, Willi	51 York St	Westmount, Que.
Greene, Leslie Kirk	598 Pine Ave. W.	Montreal, Que.
Hart, Laurence Folger Carleton	354 Stewart St	Ottawa, Ont.
Henry, Leslie Stewart	427 Mackay St	Montreal, Que.
Hoishberg, Harry	351 Berri St	Montreal, Que.
*Ito, Yukichi		Japan.
Jue, Peter Bay	336 Lagauchetiere St. W.	Montreal, Que.
Kirk, Edward William	1849a Boyer St	Montreal, Que.
*Kondo, Renji		Japan
Labell, Maurice Nelson		Mansonville, Que.
Lafontaine, Gerard H.	1303 St. Hubert St	Montreal, Que.
La Montagne, Henri Gaston	802 Dorchester St. W.	Montreal, Que.
Larose, Paul	212 Prud'homme Ave	Montreal, Que.
Lyman, Walter K. Gordon (Arch.)	74 McTavish St	Montreal, Que.
Mackenzie, Brouard Hunter Tyndall	91 Steadman St	Moncton, N.B.
Macklin, Herbert George		Fenella, Ont'
Mahaffy, Herbert Laurence	B.6, Board of Trade	Montreal, Que.
Millar, Thomas Boyd		Portage La Prairie, Man.
Mosher, Wilfrid Douglas		Lunenburg, N.S.
Parnell, Eric	68 Rye St	Medford, Mass.
Parsons, Frederick Sidney		East Angus' Que.
Powell, John Murray	180 Cooper St	Ottawa, Ont.
Roberton, Kenneth Baillie	138 Crescent St	Montreal, Que.
Ross, James Hamilton	811 University St	Montreal, Que.
Rutherford, William Jackson	109 Cote St, Antoine Rd.	Westmount, Que.
Schippel, Walter Herbert	325 de l' Epée Ave	Outremont, Que'
Seath, William Pringle	55 Sussex Ave	Montreal, Que.
Shapter, Carl	137 Charron St.	Montreal, Que.
Smith, Edmund Howard	4129 Western Ave	Westmount, Que.
Thomson, Walter Wilfred	Apt. 4, 1267 Bernard Ave.	Montreal, Que.
Tison, Maurice	234 Pius ix Blvd	Montreal, Que.
Vessot, Charles Ulysses	67 Balsam St	Ottawa, Ont.
Wiggs, Gordon Lorne	"Hessel Grove," St. Foye Rd	Quebec, Que.
Windsor, J. Rorke	389 Clarke Ave	Westmount, Que.

FOURTH YEAR

Amdur, Leon	2150 Clarke St	Montreal, Que.
Anderson, Clayton Earle	118 Strathcona Ave	Ottawa, Ont.
Arbuckle, James Stewart		Pictou, N.S.
Beach, Donald Johnston	James and Kent Sts	Ottawa, Ont.
Brennen, Herbert Joseph	250 Wood Ave	Westmount, Que.
Brennen, James Hugh	250 Wood Ave	Westmount, Que.
Buchanan, Colin Archibald		Levis, Que.

*Partial.

NAME	STREET ADDRESS	CITY OR TOWN
Demers, Paul Emile	56 Sherbrooke St. W.	Montreal, Que.
Fenster, Moe (Arch.)	233 Esplanade Ave	Montreal, Que.
Fraser, Isaac Matheson		Pictou, N.S.
Gerez, José M.	74 Sparks St	Ottawa, Ont.
Green, J. K. Macdonald	Apartado, 12B	Mexico City, Mexico.
Irwin, Gifford Melville	150 Broadway W	Vancouver, B.C.
Laing, Richard Ross	415 Victoria Ave	Westmount, Que.
Lawrence, Harold George	174 Wentworth St	St. John, N.B.
Levin, Jacob	305 Somerset St. E.	Ottawa, Ont.
Levitt, Ephraim	149 Hutchison St	Montreal, Que.
Little, Harold Butler (Arch.)	201 McLeod St	Ottawa, Ont.
McEvers, Harold Eric (Arch.)	Box 295	Cobourg, Ont.
McIntosh, Ernest Donald		Carleton Place, Ont.
McLellan, Harold Elmer		Summerside, P.E.I.
Mouquin, Henri Jr		Sparkill, N.Y. U.S.A.
Ord, Sidney Arthur		Weston, Ont.
Palmer, Robert Newton		Norwich, Ont.
Patten, Roy Hamilton		St. George P.O., Ont.
Pitt, Sylvester Sheridan	6348 Durham Ave Ahuntsic Ward	Montreal, Que.
Proudfoot, David Gibb	2439 St. Urbain St.	Montreal, Que.
Standish, Samuel James		Waterloo, Que.
Thompson, Gratton Dalrymple (Arch.)	"Fan-na-Greine," Cote des Neiges Rd	Montreal, Que.
Tousaw, Albert Anderson	628 Belmont Ave	Westmount, Que.
Walker, Melvyn Lothian		Pointe-Gatineau, Que.
Wall, William Clarence	847 University St	Montreal, Que.
Wallace, George Arthur		Granby, Que.

FACULTY OF MEDICINE.

FIRST YEAR

Aberson, Ellis	735 E. Adams St	Syracuse, N.Y., U.S.A
Ackman, Frederic Douglas	177 Botsford St	Moncton, N.B.
Aitken, Leslie		Aitken's Ferry, P.E.I.
Aylward, Gerald Fitzgerald	c/o Mrs W.A. Stevens, 3809, 8th St. W.	Calgary, Alta.
Backer, David Russell	1444 Clarke St	Montreal, Que.
Ballon, Harry Clarence	269 Bishop St	Montreal, Que.
Blain, James George	32 Lansdowne Ave	Sault Ste. Marie, Ont.
Blumenfeld, Edward Alexander	1013 Clarke St	Montreal, Que.
Boon, George Arthur		Longueuil, Que.
Boucher, Claude Georges	20 Clinton Ave	Brockton, Mass., U.S.A.
Boucher, Pierre Ange	20 Clinton Ave	Brockton, Mass., U.S.A.
Britton, Sydney William	16 Clifton Terrace	Barnstaple, England.
Bruce, Hugh Graham		Revelstoke, B.C.
Buckley, Francis Joseph		Gloucester Jct., N.B.
Bulger, Craig Daniel		Eganville, Ont.
Bunsick, Philip	815 E. 170th St	New York City, U.S.A.
Burke, Hugh Edmund		Little Metis Beach, Que.
Campbell, S. Hardie		Chesley, Ont.
Caron, Réné Edouard	174 Wilbrod St	Ottawa, Ont.

Name	Street Address	City or Town
†Center, Ervin Alfred	R.R. No. 2	Lachute, Que.
Clark, Stanley Killam		Lansdowne, N.B.
Cohen, Jacob	566 St. Dominique St	Montreal, Que.
Corrigan, John Alexander	650 Wellington St	Ottawa, Ont.
†Coveler, Harry Alexander	231 St. Lawrence Blvd	Montreal, Que.
Crawford, Edwin Minter	373 Prud'homme Ave	Montreal, Que.
Crewson, Arthur Llewellyn		Alexandria, Ont.
Dawson, Martin Henry		Truro, N.S.
Demaray, John Franklin		Forest, Ont.
Dowd, Ken eth Eardley	13 Third Ave	Ottawa, Ont.
Druker, Maurice Emanuel	446 Ottaway Ave	London, Ont.
DuBerger, Réné Louis Alfred	62e King St	Sherbrooke, Que.
Duncan, Garfield George	R.R. No. 2	Billings Bridge, Ont.
Duskes, Emile	93 Pine Ave E	Montreal, Que.
Ein, William		Glace Bay, N.S.
Elder, Herbert Munro	4201 Sherbrooke St	Westmount, Que.
Elliot, Spencer Graham		Forget, Sask.
Elman, David	591 Henri Julien Ave	Montreal, Que.
Enzer, Norbert	229 Esplanade Ave	Montreal, Que.
†Evans, Otty Blair		St. John, N.B.
Fegen, Solomon	12 Marlborough St	Montreal, Que.
Feldman, Jacob	998 Cadieux St	Montreal, Que.
Fineberg, Maxwell	414 Clarke Ave	Westmount, Que.
*Fish, Anne Mildred	223 Sherbrooke St. W	Montreal, Que.
Foster, Joseph Graeme	443 McLaren St	Ottawa, Ont.
Fox, George Lefferts, Jr.	4 Sumner St	Hartford, Conn., U.S.A.
Fraser, William Allen	cor. Rockland Ave. & St. Charles St	Victoria, B.C.
†Freedman, Joseph	93, 6th Ave	Lachine, Que.
†Freedman, Newman Barnett	86 Park Ave	Montreal, Que.
Geshelin, Harry Israel	2533, 12th Ave	Regina, Sask.
Gibbons, Emma Culross	97 Ambrose St	Rochester, N.Y.
Gillander, Erwin Wade		Bury, Que.
Gincherman, Abie	24 Clarke St	Montreal, Que.
Gold, Solomon	797 Drolet St	Montreal, Que.
Goldman, Ephraim Julius	816 Almond St	Syracuse, N.Y., U.S.A.
Gruber, Saul	898b City Hall Ave	Montreal, Que.
Hall, Earle Reginald	1985, 12th Ave. W	Vancouver, B.C.
Hamilton, Ronald Lorne	c/o Bank of Commerce	Quebec, Que.
Harkins, Edward Blake	201 Crawford St	Toronto, Ont.
Harwood, William Liddell	1745 Hutchison St	Montreal, Que.
Hay, James Cecil	654 Dallas Rd	Victoria, B.C.
Heaney, William George	460 Superior St	Victoria, B.C.
Heller, Harry	662 City Hall Ave	Montreal, Que.
Hershon, Henry	1402 Clarke St	Montreal, Que.
Hill, Emerson Stanley	137 McLeod St	Ottawa, Ont.
Hin, Chan Qui	2220 Cook St	Victoria, B.C.
Holt, Chas. Robert		Westport, Essex Co., N. Y., U.S.A.
Howell, John Murphy	259 Fortune St	Montreal, Que.
Hume, William Edward	15 Montreal St	Sherbrooke, Que.
Jackman, Leo Joseph	45 Springdale St	St. John's, Nfld.
Jardine, Ingham Wright		Kensington, P.E.I.
Jessup, Horace Sihler		Ladysmith, B.C.
Johnson, Francis Bell	48 Lorne Ave	Montreal, Que.
Jones, Thomas Meredith	100 Jones Bldg., 711 Fort St.	Victoria, B.C.
Jones, Walter Howell		Jackson, Ohio, U.S.A.
Karam, Elias John	308 Dalhousie St	Ottawa, Ont.
Kearns, Hubert John		Chesterville, Ont.

*Partial. †Double Course.

Name	Street Address	City or Town
Knight, Francis Herbert	34 Circular Rd	St. John's, Nfld.
†Kay, Edwin	637 St. André St	Montreal, Que.
†Knowlton, Henry Corey		Guilford, Me., U.S.A.
Korenburg, Samuel	85 Suzanne St	Montreal, Que.
Kutzman, Nathaniel	1557 St. Lawrence Blvd	Montreal, Que.
Laframboise, Georges E.	692 St. Patrick St	Ottawa, Ont.
Lambly, Comrie Stewart	139 Laporte Ave	Montreal, Que.
Lamoy, Lester Thomas		Ausable Forks, N.Y., U.S.A.
Lawson, Walter John		Eganville, Ont.
Lax, Abel		Hawkesbury, Ont.
Levis, John William	3214 W. Polk St	Chicago, Ill., U.S.A.
Lynn, Leo Joseph	16 Lambert St	Chelsea, Mass., U.S.A.
†McClure, James Carswell		Cowansville, Que.
McDonald, Claude Augustine	201 Agnes St	New Westminster, B.C.
McDonald, Ronald Joseph	201 Agnes St	New Westminster, B.C.
McElligott, Dominic C.		Eganville, Ont.
McGill, Chas. Sherlock, Jr.		Shelburne, N.S.
McGrand, Frederic Addison	Burtts Corner	York Co., N.B.
MacIntosh, Donald Smith		West River, Picton Co., N.B.
McRae, Arthur Lyell	711 Melrose Ave	Saskatoon, Sask.
Mader, Victor Owen	59 Morris St	Halifax, N.S.
Magonet, Solomon		Glace Bay, N.S.
Mair, Harold Osborne		Chesley, Ont.
Major, Emile Joseph Sylvain	12 Friel St	Ottawa, Ont.
Marcovitch, Joseph	276 Sanguinet St	Montreal, Que.
Marcus, David	1074 St. Urbain St	Montreal, Que.
Marks, Moses Isaac	173 Colonial Ave	Montreal, Que.
Massé, Norman	546 St. Denis St	Montreal, Que.
Massie, Redvers Albert	420 Mt. Stephen Ave	Westmount, Que.
†Mirsky, Samuel	359 Cumberland St	Ottawa, Ont.
Mitchell, Samuel Leslie	207 Douglas Ave	St. John, N.B.
Moodie, George Earl	322 Lyon St	Ottawa, Ont.
Morgan, George Senkler	4173 Western Ave	Westmount, Que.
†Murray, William Alexander		Brownsburg, Que.
Nurse, Clarenton Chesterfield		Couva, Trinidad, B.W.I.
O'Connor, John Ambrose	410 Gloucester St	Ottawa, Ont.
Orlando, Lorenzo	554 Flushing Ave	Brooklyn, N.Y., U.S.A.
O'Toole, Thomas Patrick		Arnprior, Ont.
Parlow, Allan Laurence	411 McLaren St	Ottawa, Ont.
Pelletier, Emery	22 Viola St	Providence, R.I., U.S.A.
†Petersen, James Norman	1214a Des Erables St	Montreal, Que.
Petrie, Edward Archibald	3 Leonard Ave	Ottawa, Ont.
Pinhey, John Wolfenden		Hudson Heights, Que.
Pullar, William Christopher	8 E. Queen St	Kingston, Jamaica, B.W.I.
Quinn, John Gladstone	352 Napean St	Ottawa, Ont.
†Rabinovitch, Jacob	213 Laval Ave	Montreal, Que.
Rafolovitch, Moses Jacob	29 Park Ave	Montreal, Que.
*Richardson, Eric Carleton	21 Pine St	Brockville, Ont.
Robertson, James Ritchie	24½ So. Park St	Halifax, N.S.
Robertson, William Lewis	118 Gilmour St	Ottawa, Ont.
Robillard, Antoine Benjamin	262 Lagauchetiere St. E.	Montreal, Que.
Robillard, Matthew Joseph	195 Nicholas St	Ottawa, Ont.
Robinson, Eber Cleworth	9 Glen Ave	Ottawa, Ont.

*Partial. †Double Course.

NAME	STREET ADDRESS	CITY OR TOWN
Rosenboehm, Wilfrid	126 Inspector St	Montreal, Que.
Rowan, Arthur Alexander	Rowan Place, off Kennedy St	St. John, N.B.
Rubenstein, Chas. Sollie	823 Almond St	Syracuse, N.Y., U.S.A.
†Rubin, Saul	182 St. Marguerite St	Montreal, Que.
Rutenburg, Leo	1008 St. Urbain St	Montreal, Que.
Scharfe, Ernest Edward	R.R.1	Billings Bridge, Ont.
Schmones, Benjamin	1018 Hoe Ave., Bronx	New York City.
Schultz, Charles	191 Colonial Ave	Montreal, Que.
Segal, Benjamin Wolf	136a Drolet St	Montreal, Que.
Selzer, Julius	1702 Clay Ave	New York City
Shaver, Frank Wilson	95 Canning St	Montreal, Que.
Sheets, Cecil Clarence		Massena, N. Y., U.S.A.
Sheret, Andrew William	646 Gorge Rd	Victoria B.C.
†Silver, Philip George	459 Mt. Pleasant Ave	Westmount, Que.
Silverberg, Arvid Constantin	767 Georgia St. E.	Vancouver, B.C.
Silverman, Norman	850a Cadieux St	Montreal, Que.
Smallman, Ralph Benjamin		Wolfville, N.S.
Smith, Herbert Gordon	205 Rockland Rd	St. John, N.B.
Smith, Walton Harold Young	294 Lyon St	Ottawa, Ont.
†Somerville, Wallace Bertram		Bristol, N.B.
Spiro, Charles		New Glasgow, N.S.
Stilwell, Luther Hamilton	48 St. Matthew St	Montreal, Que.
Story, Gladys Victoria, B.A.		Wawanesa, Man.
Tarshis, Anny	1954 Mance St	Montreal, Que.
Trott, Harold Williams		Mount Brydges, Ont.
Wagner, Otto	1549 Clarke St	Montreal, Que.
Wallace, Frank Wibert	Bax 622	Nelson, B.C.
Watson, Chas. Arthur	Carrier 29	Victoria, B.C.
Waxman, Abe	1222 Clarke St	Montreal, Que.
Whiting, Richard Charles	662 Belmont Ave	Montreal, Que.
Wilkie, Archibald Leslie		Antigonish, N.S.
Wilson, George Andrew	R.R. No. 2	Kars, Ont.

SECOND YEAR

Adams, Earl Hay		Pointe Claire, Que.
Allen, Harold McClellan	108 Carlton St	Toronto, Ont.
Apps, Carl Overy	R.R. No. 2, "Evergreen Lodge"	Brantford, Ont.
Archibald, Charles William	Murdoch Sq	Halifax, N.S.
Bankier, John P.	105 Aberdeen Ave	Hamilton, Ont.
Bassen, Edward Joseph	251 King St. E.	St. John, N.B.
Baxter, Joseph Murray	105 Union St	St. John, N.B.
Benjamin, Ben, B.A.	455 Clarke St	Montreal, Que.
Boyd, Jessie Marion, B.A.	4253 Dorchester St	Westmount, Que.
Breitman, Harry Benjamin	273 Laval Ave	Montreal, Que.
Brooks, W. Arthur		Indian Head, Sask.
Brouse, Ivan Edwin		New Denver, B.C.
Buckman, Charles	25 Hutchison St	Montreal, Que.
Bussière, Henry Charles	114 Ste. Famille St	Montreal, Que.
Cashin, Martin Francis	38 Queen's Rd	St. John's, Nfld.
Childs, Mary C., B.A.	129 Bishop St	Montreal, Que.
Copeland, John Gardner, B.A.		Cornwall, Ont.
Copeland, Newall		Cornwall, Ont.
Davidson, Walter McDonald		Newton, Ont.
†Davis, Aaron	32 Notre Dame St	Lachine, Que.
Dickey, Ernest		Perdue, Sask.
Donnelly, Russell Henry		St. John, N.B.
Drabkin, Charles	165 Laval Ave	Montreal, Que.

†Double Course.

Name	Street Address	City or Town
Druckman, Karl, B.A.	1010 St. Lawrence Blvd.	Montreal, Que.
Feigenbaum, Benjamin	1058 City Hall Ave.	Montreal, Que.
†Fitzgerald, Ralph Richard	601, 20th Ave. W.	Calgary, Alta.
Fluhmann, Chas. Frederic		Kenogami, Que.
Fox, Chas. Brendan		St. John's, Nfld.
Gardner, Alex. John		Cornwall, Ont.
Gauthier, Fernado A.		Matheson, Ont.
George, Dixon McDonald		Eganville, Ont.
Gillmor, Horace M.		St. George, N.B.
Goldberg, Lewis	993 City Hall Ave.	Montreal, Que,
Goldman, Solomon	490 Wilson Ave.	Montreal, Que.
†Golt, Moses Israel	1185 St. Lawrence Blvd.	Montreal, Que.
Gordon, Donald Cameron	19 Monk St.	Ottawa, Ont.
Gregson, William Ewart	1216 Gladstone Ave.	Victoria, B.C.
Griffin, Charles Norman		Paradise, Montserrat, B.W.I.
Griffith, Harold Randall, B.A.	221 Peel St.	Montreal, Que.
Hart, Harry Harper, B.A.	731 Upper Belmont Ave.	Westmount, Que.
Hynes, John Story		Kensington, P.E.I.
Irwin, Lilian Doris, B.A.	631 Victoria Ave.	Westmount, Que.
Jardine, Hugh	140 King St.	Moncton, N.B.
Katzman, Harold	1202 Neilson St.	Utica, N.Y.
Kearns, Walter Patrick		Chesterville, Ont.
Kinsman, James Murray		Centreville, King's Co., N.S.
Klein, David	180 St. Joseph Blvd. W.	Montreal, Que.
Laishley, Wilfrid	228 Waverley St.	Ottawa, Ont.
Levin, Tom	1352a Cadieux St.	Montreal, Que.
Lewis, Mortimer Harold	520 Plant St.	Utica, N.Y.
†Lipsey, Hyman	66 Bruce Ave.	Westmount, Que.
Livshin, Nathan Norman	110 Monroe St.	Syracuse, N.Y.
McCormick, Robert Roy		Arnprior, Ont.
Macdonald, Douglas Ogilvie		Sutton, Que.
McDonald, Hugh Reid		Newton, Ont.
McGregor, John	1 Belmont Bldg.	Victoria, B.C.
McIntosh, John F., B.A.	43 Park Ave.	Ottawa, Ont.
MacLean, Chester Peter		Cardigan, P.E.I.
MacLellan, Donald Francis		Glenville, N.S.
MacMillan, Douglas W.		Utica, N.Y., U.S.A.
McNabb, Atholl Munro	103 Gilmour St.	Ottawa, Ont.
McNamee, Francis Patrick	959 Fisgard St.	Victoria, B.C.
Maillard, Edgar R.	1 Frederick St., Port of Spain	Trinidad, B.W.I.
Markovitz, Max	13 Church St.	Montreal, Que.
Massiah, John Hubert		British Guiana, S. America.
Messinger, Moses Joseph	718 Colonial Ave.	Montreal, Que.
Miller, George Gavin	80 Somerville Ave.	Westmount, Que.
†Mills, Edward S.		Ormstown, Que.
Morgan, Philip John George		Sorel, Que.
Murphy, Brendan William	25 Edward St.	Halifax, N.S.
Murtha, Dale P.		Shepherd, Mich., U.S.A.
Naud, Henry J.		Smith's Falls, Ont.
O'Shaughnessy, Peter Earle	Box, 939	Cobalt, Ont.
Parke, George Kenneth	Grosvenor Apts, 756 Sherbrooke St. W.	Montreal, Que.
Parsons, Cecil James F.		Harbour Grace, Nfld.
Percival, Eleanor Susan, B.A.	649 Victoria Ave.	Westmount, Que.
Potter, Carlyle Thornton	123 Park Ave.	Montreal, Que.
Robertson, George Henry		Falmouth, Jamaica, B.W.I.

†Double Course.

NAME	STREET ADDRESS	CITY OR TOWN
Rose, William Harold		Morrisburg, Ont.
Rosenfeld, Joseph E.		Battle Creek, Mich., U.S.A.
Ross, Alexander Grant	74 Morris St	Halifax, N.S.
†Rothschild, David	323 Grosvenor Ave	Westmount, Que.
Ryan, John Thomas	214 Glencoe St	Montreal West, Que.
Schmidt, Otto Victor	50 Fort St	Montreal, Que.
Shapiro, Harry	1432 Clarke St	Montreal, Que.
Sharp, Harold Hayes		Sussex, N.B.
Shklar, Louis	833 St. Urbain St	Montreal, Que.
Skinner, William Kerr	76 Willowdale Ave	Outremont, Que.
Spohn, Henry Gordon	110 Dawlish Ave	Toronto, Ont.
Stenson, Walter Thomas, B.A.	3 Fulton Ave	Sherbrooke, Que.
Summers, Russel Arthur	1200 Esplande Ave	Montreal, Que.
Thompson, Hu h Herbert	Box 56	Gananoque, Ont.
†Usher, Barney David	970 Tupper St	Montreal, Que.
Watson, Edgar Robert	Box 85	Hawkesbury, Ont.
Wells, Thomas James		Rock Island, Que
Wert, Ford Bush		Avonmore, Ont.
Whitebread, John		Nelson, B.C.
Wittenburg, Samuel Simon	517 Frontenac St	Montreal, Que.

THIRD YEAR

Aarons, Morton Joseph	307 Monroe St	Syracuse, N.Y.
Almond, Walter Wesley		Bideford, Alta.
Armour, John Campbell	R.R. No. 3	Perth, Ont.
Beall, Franklin George Lemo	327 Roslyn Ave	Westmount, Que.
Beamish, Oswald Foster		Billings Bridge, Ont.
Behan, Edmund Joseph		Pembroke, Ont.
Bell, Everett H.		Tryon, P.E.I.
Bernstein, Felix	1659 Mance St	Montreal, Que.
Bourret, Reginald Charles J.	411 Mance St	Montreal, Que.
Bristol, John LeVarrie		Grenada, B.W.I.
Browne, Trevor Goff		Melville, Sask.
Candlish, Henry Maiben	784 Wilder Ave	Outremont, Que.
Cassidy, Gordon James	109 Lockwell Ave	Quebec, Que.
Chandler, Edward Bremner	26 Botsford St	Moncton, N.B.
Cooder, Howard Russell	201 Esplanade Ave	Montreal, Que.
Crewson, Walter Lionel		Alexandra, Ont,
Cully, James Henry		Pembroke, Ont.
Daley, Mark J.	47 Jay St	Albany, N.Y., U.S.A.
Dawson, Howard Le Rossignol, B.A.	21 Bellevue Ave	Westmount, Que.
Dowdall, Geoffrey Francis, B.A.		Almonte, Ont.
DuVernet, Edward Oliver		Digby, N.S.
Eakin, Will am Wilson	10 Ingleside Ave	Westmonnt, Que.
Emerson, C. Leonard	219 Guilford St	St. Johu West, N.B.
Fink, CharlesTelesphore		Mattawa, Ont.
Freedman, Morris	749a City Hall Ave	Montreal, Que.
Gaboury, Hector		Alfred, Ont.
Grant, Joseph Howe Brownell		Port Elgin, N.B.
Greenberg, Moses	487 Colonial Ave	Montreal, Que.
Gross, Harry S.	919 St. Lawrence Blvd	Montreal, Que.
Harkin, George H.		Vankleek, Ont.
Hawthorne, Allan Blackall, B.A.	316 Grosvenor Ave	Westmount, Que.
Heinbecker, Peter, B.A.		Listowel, Ont.
Henry, Charles Blanchard	9 Lincoln Apts., 49 Lincoln Ave	Montreal, Que.
Hornbeck, Charles Sahler	37 Wall St	Kingston, N.Y.
Humphreys, John Charles		Kinburn, Ont.
Hutchison, Keith Ogilvie	354 Mackay St	Montreal, Que.

†Double Course.

NAME	STREET ADDRESS	CITY OR TOWN
Ironstone, Paul Stanley		Sudbury, Ont.
Jamieson, William Dawson Stuart		Clapham, Que.
Kearns, Peter Joseph	165 Centre St.	Ottawa, Ont.
Keeping, Benjamin Charles		Murray Harbour, P.E.I.
Kenning, Stuart Guthrie	1503 Belcher St.	Victoria, B.C.
Kinsman, Reginald Price		Waterville, King's Co., N.S.
Lally, Louis Michael John	312 Chapel St.	Ottawa, Ont.
Lande, Joseph, B.A.	1960 Mance St.	Montreal, Que.
Landor, Robert Daniel	617 Fulton Rd., N.W.	Canton, Ohio, U.S.A.
Lapp, Victor Roy	R.R. No. 5	Cobourg, Ont.
Learoyd, Douglas Rainsford	26 Ralph St.	Ottawa, Ont.
Levitt, Abel		North Bay, Ont.
Lockhart, James R.		Bristol, N.B.
McCrimmon, Alexander Murray, B.A.		Kincardine, Ont.
McGillivray, Alex. Malcolm	R.R. No. 1, Box 40	Dalkeith, Ont.
McIntyre, Preston		Montague, P.E.I.
Malamud, William	1508 Esplanade Ave.	Montreal, Que.
Manning, Clinton Edgar, B.A.		Magog, Que.
Mapplebeck, Thomas Eric	571 Maplewood Ave.	Outremont, Que.
Murray, John Stewart		River John, N.S.
Palmer, John Hammond		Gagetown, N.B.
Paradis, Charles Ovide		Bessemer, Mich.
Parkins, Gerald Adams, B.A.	828 University St.	Montreal, Que.
Patterson, Robert Earle		Merigomish, N.S.
Planche, L. Stuart		Cookshire, Que.
Porter, William Arthur		Yarmouth, N.S.
Robillard, John Joseph	195 Nicholas St.	Ottawa, Ont.
Ross, Charles Brown, B.A.		Lucan, Ont.
Ryan, Eric James	4721 Western Ave.	Westmount, Que.
Sanders, Joseph Leonard, B.A.	435 MacLaren St.	Ottawa, Ont.
Scherzer, Morris	220 Villeneuve St. W.	Montreal, Que.
Scriver, Walter de Mouilpied, B.A.	4425 St. Catherine St.	Westmount, Que.
Shapiro, Charles Engleson	477 Wellington St.	Ottawa, Ont.
Silverman, Benjamin	745 City Hall Ave.	Montreal, Que.
Smith, Herbert Bryant	64 Montgomery St.	Gloversville, N.Y.
Stewart, Charles Conacher	Kincarrathie Crescent	Perth, Scotland
Strasberg, Alexander	674 City Hall Ave.	Montreal, Que.
Strean, George, B.A.	740 Notre Dame St W.	Montreal, Que.
Thompson, Eustace Edmund	35 Bent St.	Georgetown, Br. Guiana
Trefry, Harold Scott		Yarmouth, N.S.
Usher, Saul J., B.A.	970 Tupper St.	Montreal, Que.
Valentine, John Baptist	145 Besserer St.	Ottawa, Ont.
Walters, Lawrence John	7 Sophia St.	Ottawa, Ont.
Whiting, Harry St. John	127 Abbott Ave.	Westmount, Que.
Wyseman, Roderick Randolph	Four Roads Diegs Martin.	Trinidad, B.W.I.

FOURTH YEAR

Ainsley, Henry Bryson		Tupper Lake Jct., N.Y., U.S.A.
Baltzan, David Marcus	224 Ave. A. So.	Saskatoon, Sask.
Beattie, William Walter, B.A.	309 Stanley St.	Montreal, Que.
Brow, George Raymond	88 Upper Prince St.	Charlottetown, P.E.I.
Brown, Herbert Stanley		Cornwall, Ont.
Cahalan, Richard Edward		Wyandotte, Mich.
Campbell, Henry	2692 Hutchison St.	Montreal, Que.
Casselman, Hubert Haldane Lee		Winchester, Ont.
Cassidy, Halton Creighton, B.A.	383a Aylwin Ave.	Montreal, Que.
Coulson, Robert Berry McAllan	538 Grosvenor Ave.	Westmount, Qu

Name	Street Address	City or Town
Duffy, Joseph Leonard	404 Mance St	Montreal, Que.
Eaton, Carl Margeson		Truro, N.S.
Ellis, Harold Lloyd		Kingstown, St. Vincent, B.W.I.
Facey, Frederick Duncan		Millet, Alta.
Farmer, Vincent		Vankleek Hill, Ont.
Foley, Timothy Francis Joseph.	Misericordia Hospital	Edmonton, Alta.
Fraser, Ale . Ashley		Lakefield, Ont.
Gilhooly, Joseph Patrick	229 Powell Ave	Ottawa, Ont.
Gillanders, Henry E win, B.A.		Lemesurier, Que.
Goodrich, Blynn Orville		Skowhegan, Me.
Gordon, John Keith, B.A.	356 Assiniboine Ave	Winnipeg, Man.
Henderson, Marshall Waitt	1625 Quadra St	Victoria, B.C.
Henderson, William Ewart		Chilliwack, B.C.
Heney, Vincent Paul	321 Chapel St	Ottawa, Ont.
Kramer, Raymond Walter Irwin		St. Jerome, Que.
Little, George Douglas	660 Rockland Ave	Outremont, Que.
Lozinsky, Ezra	1148 St. Urbain St	Montreal, Que.
MacDougall, James Alexander	McDougall's P.O.	Grand River, P.E.I.
McEuen, Charles Stuart	30 Macgregor St	Montreal, Que.
McLellan, Wilfrid Gillies, B.A.	189 Villeneuve St.W	Montreal, Que.
McLeod, Roderick Alexander		Southey, Sask.
Markson, Moses		Alexandria, Ont.
Miller, Louis Albert	9621 , 107th Ave	Edmonton, Alta.
Montgomery, Lorne Cuthbert		New Richmond, Que.
Moret, Herman		Sion, Valois, Switzerland.
Moyse (Moisescu), Manole Don.	933 Dorion St	Montreal, Que.
Notkin, Louis J.	140 Cherrier St	Montreal, Que.
Notkin, Meyers	140 Cherrier St	Montreal, Que.
*Ofiesh, Kanaan Fares	694 Visitation St	Montreal, Que.
Parsons, Arthur Reginald		Coley's Pt., Bay Roberts, Nfld.
Power, Richard Michel	48 Scott St	Quebec, Que.
Ross, Frederick Dudley Eyre	791 University St	Montreal, Que.
Ruby (Rabinovitch), Carl	255 Esplanade Ave	Montreal, Que.
Ryan, Clarence Albert	962 Howe St	Vancouver, B.C.
Segall, Harold Nathan	1621 De la Roche St	Montreal, Que.
Sihler, Charles Harold	403 Union Ave	Litchfield, Ill.
Smith, Egerton Elliott	513 St. André St	Montreal, Que.
Stuart, William Charles, B.Sc. (Arts)	929 Willow Ave	Hoboken, N.J., U.S.A.
Taylor, Clifford Ethridge	50 Nickel St	Cobalt, Ont.
Thorne, Laurence Hubert		Millbrook, Ont.
Trainor, Owen Connolly		Charlottetown, P.E.I.
Tweedie, William C.		Rockland, Ont.
Viner, Abraham Korah, B.A.	85 Mt. Royal Ave. W	Montreal, Que.
Waugh, Theodore Rogers		St. Albans, Vt.
Williamson, Norman Trenholme.	143 The Boulevard	Westmount, Que.
Wilson, Percy Milton	628, 12th Ave. E	Vancouver, B.C.
Young, Arthur Wilson		Revelstoke, B.C.

FIFTH YEAR

Aikins, Charles Ernest		Guysboro Intervale, N.S.
Almond, Frank Willis		Boise, Idaho, U.S.A.
Auerbach, Wolf	302 St. George St	Montreal, Que.
Backus, Percy Lavern		Edgerton, Alta.
Barnhart, Walter Simpson	341 Gloucester St	Ottawa, Ont.
Belyea, George Nelson		Coldstream, N.B.
Boone, Storer Woodford		Presque Isle, Me.

Name	Street Address	City or Town
Bowles, Albert Webster		Biggar, Sask.
Caldwell, David Manchester		Arnprior, Ont.
Cameron, Arthur Hugh		St. Peter's, N.S.
Campbell, William Northcott	R.I., Box 68	Dalkeith, Ont.
Challenger, Neville E.		Basseterre, St. Kitts, B.W.I.
Christie, John Edward, B.Sc.		Lachute, Que.
Coote, Frank Taschereau	73 Ann St.	Quebec, Que.
Cross, John Samuel	77 Waller St.	Ottawa, Ont.
da Silva, Austin Peter R.	300 Thomas St.	Georgetown, Br. Guiana
Dickie, John Barrie		Truro, N.S.
Dickson, Frederick Russell	2300 Waverley St.	Montreal, Que.
Empay, Howard S.		Edmonton, Alta.
Fleck, William Westwood, B.A.	20 Bishop St.	Montreal, Que.
Fraser, Donald	36 Mornington St.	Stratford, Ont.
Frawley, John Milan		Sudbury, Ont.
Freedman, Nathan	825 Clarke St.	Montreal, Que.
Friefeld, Gilbert Harry	756 University St.	Montreal, Que.
Garber, Hyman	1232 Clarke St.	Montreal, Que.
Gareau, Urban J.	396 Lyon St.	Ottawa, Ont.
Gibb, Stewart Hilson, B.A.	131 Clandeboye Ave.	Westmount, Que.
Goodridge, Leslie Ayris	Box 79	Bridgetown, Barbados
Gregory, Henry Bascom	Foursquare	St. Philip, Barbados.
Hankinson, Cecil Hazen	27 Myrtle St.	St. Thomas, Ont.
Hill, Wm. Hawksley	9806, 85th Ave.	Edmonton South, Alta.
Hindson, John Cooper	2220 Lorne St.	Regina, Sask.
Isaacman, Abraham	76 St. Lawrence Blvd.	Montreal, Que.
Kaufmann, Mark	204 Mance St.	Montreal, Que.
Kennedy, Alexander		Antigonish, N.S.
Ladouceur, Frederic, B.A.		Hawkesbury, Ont.
LeBel, Moise Wm., B.A.	66 Stewart St.	Ottawa, Ont.
Leggo, Ralph Christopher	14 Somerset St.	Ottawa, Ont.
Lerner, Leiber Wolfe	130 Bridge St.	Quebec, Que.
Lowry, George Leonard		Carp, Ont.
McCabe, Charles Penny		Pictou, N.S.
McCarville, Charles Raymond		Kinkora, P.E.I.
McCreary, Samuel Russell, B.Sc. (Arts)	869 Manning Ave.	Toronto, Ont.
McCullough, John Thomas		Science Hill, Ont.
McDonald, Angus Lawrence		Penetanguishene, Ont.
McLean, Aubrey Bertram		Port Hood, N.S.
Miller, Fred Gus		Vermilion, Alta.
Nathanson, Joseph Norman	359 Cumberland St.	Ottawa, Ont.
Newhook, William H.		Carbonear, Nfld.
Novak, Gregory		Model Farm, Sask.
Pardoe, John Borden	1122 N. El. Dorado St.,	Stockton, Cal.
Pickup, William Alfred		Granville Ferry, N.S.
Rankin, Bertrand Fred	313 S. Broadway	Corpus Christi, Texas, U.S.A.
Read, Walter Welton	396 Tower Rd.	Halifax, N.S.
Riopel, Jos. Henry		Morinville, Alta.
Sample, Leon Ernest	103 Chandler Ave.	Detroit, Mich. U.S.A.
Savory, Philip Maxwell Hugh	18 D'Urban St.	Georgetown, B.G.
Scott, William Earl	285 Beaver Hall Hill	Montreal, Que.
Sicard, Lionel John		Buckingham, Que.
Street, John Archibald	302 Broadway, W.	Vancouver, B.C.
Swancesky, Francis V.	240 Third St.	New Westminster, B.C.
Tallon, John Alexander		Cornwall, Ont.
Tenney, Roy Edward		Wabasha, Minn

NAME	STREET ADDRESS	CITY OR TOWN
Throop, Wilfred Earle, B.A.	63 Pearl St, W.	Brockville, Ont.
Trossman, Isidor	756 University St.	Montreal, Que,
Upham, George Ashton, B.A.		150 Mile House, B.C.
Wheaton, Hazen Ashley, B.Sc.		Petitcodiac, N.B.
Williams, John Rainford		Salem, Jamaica, B.W.I.
Williamson, Ralph MacAlpine	1830 Victoria Ave.	Regina, Sask.
Young, Herbert Maitland	Apt. 18, 49 Lincoln Ave	Montreal, Que,

STUDENTS IN DENTISTRY.

FIRST YEAR

Abramovitch, Charles	97 Balmoral Place	Winnipeg, Man.
Auclair, Alfred Stanley		St. Jean Baptiste, Rouville Co., Que.
Bourke, William Manly	42 Lorne Ave	Montreal, Que.
Broderick, James Vincent	Box 341	Cornwall, Ont.
Burton, Thomas Edwin		Cookshire, Que.
Chatters, Othello Pritchard	1772 McSpadden St.	Vancouver, B.C.
Clement, Louis Albert	342 St. Joseph St.	Lachine, Que.
Cohen, Barnet Joseph	8a Dorchester St. W	Montreal, Que.
Crowe, Albert Douglas	1052 Willow Ave.	Moose Jaw, Sask.
Dworkin, Simon	2116 St. Urbain St.	Montreal, Que.
Evans, Raymond Noyes	271 Eastern Ave.	E. Lynn, Mass.
Fels, Gerald Bernard	612 Victoria Ave.	Westmount, Que.
Frankl'n, Gerald	1539 Esplanade Ave.	Montreal, Que.
Gross, Munsey Edward	1018 St. Lawrence Blvd	Montreal, Que.
Grossman. Albert	2368 Waverley St.	Montreal, Que
Harris, Saul	25 Craig St. W.	Montreal, Que.
Hyndman, Alexander William	45 Montreal St.	Sherbrooke, Que.
Kelly, Gordon Percy		Huntingdon, Que.
Knight, Harold Nelson	106 Trelawne Ave.	Sault Ste. Marie, Ont.
Lank, Harold Henry	1591 Cadieux St.	Montreal, Que.
McCarthy, Gerald James	150 Ste. Famille St.	Montreal, Que.
McDonagh, William Anthony	1168 Delorimier Ave.	Montreal, Que.
Moses, Charles Hyman	153½ Queen St. W.	Toronto, Ont.
Rosen, Louis Julius	1630 Mance St.	Montreal, Que.
Schwartz, Jacob	1056 Sherbrooke St. E.	Montreal, Que.

SECOND YEAR

Bernfeld, Benjamin	218 St. Joseph Blvd. W.	Montreal, Que.
†Goldwater, Ephraim	201 St. Joseph St.	Lachine, Que.
Gottlieb, Henry	1364 St. Urbain St.	Montreal, Que.
Hale, George McAdie	104 Grey Ave.	Montreal, Que.
Hyams, Bernard Lawrence	66 Ste. Famille St.	Montreal, Que.
Kutzman, Ernest Abraham	1557 St. Lawrence Blvd.	Montreal, Que.
Laurin Earl M	341 Charlevoix St.	Montreal, Que.
Nygard, Alfred		Munsala, Finland.
Ratner, Michael	726 Colonial Ave.	Montreal, Que.
Rosenbaum, Frank Leon	57 Sherbrooke St. E.	Montreal, Que.
Salomon, Nathan	179 Esplanade Ave.	Montreal, Que.
Veith, George Selwyn	80 Duluth Ave. W.	Montreal, Que.
Wiener, Judah	1000 St. Viateur St. W.	Montreal, Que.

THIRD YEAR

NAME	STREET ADDRESS	CITY OR TOWN
Adams, Marston Emery		Magog, Que.
Dance, James	2625 Hutchison St.	Montreal, Que.
Docks, Rupert George	722 Laval Ave.	Montreal, Que.
Donnelly, William Thomas	64 Moore St.	St. John, N.B.
Eidinger, Louis Samuel	1232a Cadieux St.	Montreal, Que.
Fineberg, Joseph	1764 Clarke St.	Montreal, Que.
Jenks, Archie Nathaniel		Coaticook, Que.
Leahy, W. G.		Franklin Centre, Que.
MacSween, Sydney Alexander	375 Mance St.	Montreal, Que.
Parker, Chester Thompson		Leeds Village, Que.
Pesner, Isidore N.	1918 Mance St.	Montreal, Que.
Ratner, Banus	1658 Esplanade Ave.	Montreal, Que.
Walsh, Arthur Lambert	280 Clifton Ave.	Montreal, Que.

FOURTH YEAR

Bradley, Frederick Hamilton		Sherbrooke, Que.
Edmison, Ralph Williams	2036 Hutchison St.	Montreal, Que.
Jack, A. Clifford	416 Mackay St.	Montreal, Que.
Kolber, Moses	1089 St. Lawrence Blvd.	Montreal, Que.
Lande, Nathan	1960 Mance St.	Montreal, Que.
Moraites George D.	General Hospital	Montreal, Que.
Morison, Charles F.	Birks Building	Montreal, Que.
Schachter, Samuel J.	260 Ontario St. E.	Montreal, Que.
Wisse, William Horatius	946 Colonial Ave.	Montreal, Que.

STUDENTS IN PHARMACY.

Arbess, Jacob	1914 Mance St.	Montreal, Que.
Bailey, Henry Louis		Kingston, Ont.
Brooks, Stanley Seymour	180 Agnes St.	Montreal, Que.
Budning, Harry	66 Dorchester St. W.	Montreal, Que.
Dubnitzky, Joseph	31 Butler St.	Montreal, Que.
Hertz, Ella	2280 Esplanade Ave.	Montreal, Que.
Leduc, Louis Amable	327 Maisonneuve St.	Montreal, Que.
Lyons, Robert Henry	8-10 Bleury St.	Montreal, Que.
Mackie, James Garden	Apt. 24, 900 St. Catherine St. W.	Montreal, Que.
Magnan, Charles Auguste		St. Elizabeth, Joliette Co., Que.
Miller, Michael Jack	219 Esplanade Ave.	Montreal, Que.
Palmer, Gerald Ecclestone	1346 Delorimier Ave.	Montreal, Que.
Saunders, Harold Lynd		Bedford Que.
Selsky, David	184 Laval Ave.	Montreal, Que.
Shpritser, Jack	140 Laval Ave.	Montreal, Que.
Singer, Frank Lorne	Apt. 5, 421 Esplanade Ave.	Montreal, Que.
Tyrrell, Kenneth Walter	15 Plateau St.	Montreal, Que.
Weinrauch, Emmanuel L.	1234 Clarke St.	Montreal, Que.

FACULTY OF LAW.

FIRST YEAR

NAME	STREET ADDRESS	CITY OR TOWN
Anglin, Gerald Gardnier		Lancaster Heights, St. John, N.B.
Bernard, Rodolph	847 Oxenden Ave	Montreal, Que.
*Cohen, Harry Isaac	1400 Clarke St	Montreal, Que.
Crankshaw, John Edwin	451 Claremont Ave	Westmount, Que.
de Martigny, Frs. Camille		St. Jerome, Que.
Dooner, Richard James	749a Bloomfield Ave	Outremont, Que.
Doucet, Charles Emile		Thetford Mines, Que.
Foster, George Buchanan	8 Edgehill Ave	Montreal, Que.
Gallery, John O'Neill	237 Mountain St	Montreal, Que.
Goodman, Clara Anita		Campbellton, N.B.
Grigg, Alec Phelps, B.A.	The Maxwellton, Sherbrooke St.	Montreal, Que.
Hibbard, Charles Ambrose Lane, B.A.	832 Lorne Crescent	Montreal, Que.
Honey, Howard Percy, B.A.	275 Addington Ave	Montreal, Que.
Hurtubise, Louis Vincent	763 Somerset St	Ottawa, Ont.
Iseli, Beny R.	45 Overdale Ave	Montreal, Que.
Lecker, Calla	75 Mt. Royal Ave., W.	Montreal, Que.
McCloskey, Francis Leo		Chesterville, Ont.
McGillis, Alexander Francis	4833 Western Ave	Westmount, Que.
MacKenzie, John M., B.A.		Hartsville, P.E.I.
McLean, Willard Earl	575 Rockland Ave	Outremont, Que.
*Millman, Aaron	80 Laval Ave	Montreal, Que.
Moscovich, Max Enoch	609, 5th St. S.	Lethbridge, Alta.
Neumann, Harold	4927 Sherbrooke St	Westmount, Que.
Patterson, James Duke	4049 Dorchester St	Westmount, Que.
Perron, James B.	296 Pine Ave. W	Montreal, Que.
Phillimore, Gerald Hawkeswood	20 Lincoln Ave	Montreal, Que.
Popliger, Israel Alexander	734 Shuter St	Montreal, Que.
Presner, Philip, B.A.	56a Shearer St	Montreal, Que.
Sabourin, Antoine Oscar Ivan		St. Johns, Que.
Shapiro, Joseph Jack	127 Mt. Royal Ave. W	Montreal, Que.
Shulemson, Abraham, B.A.	717 Berri St	Montreal, Que.
Shulman, Samuel Alexander	1632 St. Urbain St	Montreal, Que.
Wagner, Harry	1875 Esplanade Ave	Montreal, Que.

SECOND YEAR

*Baker, Effie	Glenmere	Bolton Centre, Que.
*Braidwood, Theodora Currie, B.A.	4490 Sherbrooke St	Westmount, Que.
Hughes, Adella Currie, B.A.	854 Lorne Crescent	Montreal, Que.
Pender, Gordon Matthew		Windsor Mills, Que.
Philbrick, George William		Danville, Que.
Seguin, André Humbert		Rigaud, Que.
Shvemar, David	1505 Clarke St	Montreal Que.
Sigler, Max Isidore, B.A.	2278 Esplanade Ave	Montreal, Que.
Tolzess, Isadore Louis	1628 Hutchison St	Montreal, Que.
Versailles, Maurice, B.A.	131 Stanley St	Montreal, Que.

THIRD YEAR

*Bell, Florence Seymour	147 St. Luke St	Montreal, Que.
Bridgman, Randolph Harwood, B.A.	482 Strathcona Ave	Westmount, Que.
Cameron, Dakers, B.A.	819 Lorne Crescent	Montreal, Que.
Cloutier, Clarence I.		Roxton Pond, Que.
Decker, Saul William	1922 Mance St	Montreal, Que.
Dupuis, Vincent	175a Christophe Colomb St.	Montreal, Que.
Masson, Edouard	230 Delorimier Ave	Montreal, Que.
Nicholson, William Cedric, B.A.	276 Pine Ave W	Montreal, Que.
Singer, Maxwell Bernard		Sussex, N.B.

*Partial.

FACULTY OF AGRICULTURE.

FIRST YEAR

NAME	STREET ADDRESS	CITY OR TOWN
*Armitage, Wendell Henry	Box 23	Sherbrooke, Que.
Baker, Charles Barnard	194 Milton St	Montreal, Que.
Beaudin, Joseph Leon Arcadius		Ormstown, Que.
Clarke, Andrew Balfour	334 Elm Ave	Westmount, Que.
Crang, William Clifford	63 Bruce Ave	Westmount, Que.
*Donalds, Daniel Angus		Amherst, N.S.
*Ferry, Charles Stewart, Jr		Huntingdon, Que.
Gordon, William Laurence	R.R. No.1	Lachute, Que.
Hammond, George Henry		Aylmer, Que.
Hanson, Henry Walter		Hillhurst, Que.
*Horsey, Arthur Sutherland	25 Quinn Ave	Longueuil, Que.
McCarthy, Edward Marmaduke	112 St. Mark St	Montreal, Que.
Maw, Arthur John Goodall		Ormstown, Que.
*Ness, Robert Bruce		Howick, Que.
*Pewtress, John Amille		Beaconsfield, Que.
Salley, Edward Charles		Lachine Rapids, Que.
Shagoury, Deeb Joseph	1210 Isabeau St	Montreal, Que.
Skinner, Clarence Tipson	Macdonald College	Que.
Smith, Lawrence Arlington		Sutton, Que.
Winter, James McGill		Ormstown, Que.

SECOND YEAR

Brock, Otto Carlyle		Glen Sutton, Que.
Brown, John George	MacDonald College	Que,
Buchanan, James Stewart	Apt. 3, 670 Sherbrooke St.	Montreal, Que.
Daly, Paul Macintyre	263 Charlotte St	St. John, N.B.
Denison, Simeon Minor	Denison's Mills	Richmond, Que.
Dowling, Isabel Ernestine	R.R. No. 1	Hemmingford, Que.
Griffin, Albert Wilfred		Paradise, Montserrat,; B.W.I.
Hetherington, Samuel Judson		Cody's, N.B.
McClintock, Pearl		St. Andrew's East, Que.
MacNaughton, John Earl		Hemmingford, Que.
Newton, Dorothy Elizabeth		Senneville, Que.
Paige, Morton Baldwin		Coaticook, Que.
Parker, James Osmond		Coaticook, Que.
Richardson, James Keith	384 Oxford Ave	Montreal, Que.
Rochon, Gerard Normand	65 Laurier Ave	Hull, Que.
Schingh, Marie Joseph	166 Notre Dame St	Hull, Que.
Vincent Roderick	801 Shuter St	Montreal, Que.
Watson, Cyril James	379 Lyon St	Ottawa, Ont.

THIRD YEAR

Ashton, William Elmo		Waterloo, Que.
Birch, Anthony Home Wyrley	264 Wood Ave	Westmount, Que.
Hay, Angus Lockhart	Box 235	Lachute, Que.
Hay, William Drew	Box 235,	Lachute, Que.
MacAloney, Mary Lee		Fairview, Halifax Co., N.S.
Matthews, Albert E	33 Parade St	St. John's, Nfld.
Maw, William Alfred		Ormstown, Que.
Ness, John Earle		Howick, Que.
Pesner, Abraham Noah	1918 Mance St	Montreal, Que.
Rankin, T. B. G	131 Sherewood Ave	Toronto, Ont.
Saunders, Leslie Gale	19 Jubilee Rd.,	Halifax, N.S.
Welsh, John N		Kingsmere, Que.

*Partial.

STUDENTS IN ATTENDANCE.

SESSION 1918-1919.

ARTS.	Undergraduates.	Partials.	Total.	
First Year—Men	81	17	98	
Women	47	7	54	
Second Year—Men	31	9	40	
Women	39	11	50	
Third Year—Men	23	7	30	
Women	27	3	30	
Fourth Year—Men	31	2	33	
Women	32	1	33	
SCHOOL OF COMMERCE.				
First Year—Men	12	1	13	
Women	1	0	1	
Second Year—Men	7	0	7	
				389
APPLIED SCIENCE.				
First Year	110	1	111	
Second Year	51	0	51	
Third Year	43	4	47	
Fourth Year	33	0	33	
				242
MEDICINE.				
First Year—Men	156	0	156	
Women	3	1	4	
Second Year—Men	94	0	94	
Women	4	0	4	
Third Year	81	0	81	
Fourth Year	57	0	57	
Fifth Year	70	0	70	
				466
DEPARTMENT OF DENTISTRY.				
First Year	25	0	25	
Second Year	13	0	13	
Third Year	13	0	13	
Fourth Year	9	0	9	
				60
DEPARTMENT OF PHARMACY.				
For the Diploma of Pharmacy—Men			17	
Women			1	
				18

	Under-graduates.	Partials.	Total.	
LAW.				
First Year—Men	29	2	31	
Women	2	0	2	
Second Year—Men	7	0	7	
Women	1	2	3	
Third Year—Men	8	0	8	
Women	0	1	1	
				52
AGRICULTURE.				
First Year—Men	14	6	20	
Second Year—Men	14	0	14	
Women	4	0	4	
Third Year—Men	11	0	11	
Women	1	0	1	
				50
DEPARTMENT OF MUSIC.				
Proceedings to the Degree of Mus. Bac.—Men			1	
Women			6	
Proceedings to the Diploma of Licentiate in Music—Men			1	
Women			19	
Partial Students			77	
				104
				1381
Less number whose names appear in more than one list				25
Total				1356

UNDERGRADUATE AND GRADUATE SOCIETIES.

No Club or Society which has not been approved by the Corporation is entitled to use the name of the University, or of the Royal Victoria College. Applications for such approval, accompanied by a copy of the constitution, should be addressed to the Registrar.

The Students' Council of McGill University.

OFFICERS 1919-20.

President—W. C. Nicholson, B.A., B.C.L.
Controller—A. F. Byers, B.A.Sc.
Secretary—James A. Lalanne, B.A.

Executive Council.

————, Arts '19, Representative from Arts.
G. M. Dender, Law '20, Representative from Law.
J. R. Windsor, Sci. '20, Representative from Science.
N. Williamson, Med. '20, Representative from Medicine.
J. Gilhooley, Med. '20, President McGill Union.
L. C. Montgomery, Med. '21, President Rugby Club.
E. J. Behan, Med. '20, President Hockey Club.
J. L. O'Brien, Arts '20, President Track Club.
G. Parkins, Med. '21, President Athletic Association.
E. S. Mills, Med. '22, President "McGill Daily."

The McGill Union.

OFFICERS 1919-20.

President—J. P. Gilhooley, Med. '20.
Vice-President—D. Learoyd, Med. '21.
Secretary—Owen Trainor, Med. '20.

"McGill Daily."

OFFICERS 1919-20.

President—E. S. Mills, Med. '22.
Editor-in-Chief—A. S. Noad, B.A.
Managing Editor—J. N. Peterson, Arts '20.

Undergraduates' Literary and Debating Society.

OFFICERS 1919-20.

Hon. President—Dean Moyse.
Hon. I. U. D. L. Rep.—Dr. Wm. Caldwell.
I. U. D. L. Rep.—D. G. Proudfoot, Sci. '19
President—C. H. Adair, Arts '20.
Vice-President—B. Benjamin, Med. '22.
Secretary—J. M. Cuddy, Sci. '21.
Treasurer—D. R. Anderson, Arts '22.

Arts' Undergraduates' Society.

OFFICERS 1919-20.

Hon. President—Dean Moyse.
President—C. H. Adair.
Vice-President—C. E Hebert.
Treasurer—Keith Falconer.
(Other Officers to be elected.)

R. V. C. Undergraduates' Society.

OFFICERS 1919-20.

Hon. President—Miss Hurlbatt.
President—Jean Nichol, '20.
Vice-President—Janie Spier, '21.
Sec.-Treasurer—Nora James, '22.
(Presidents from the four years to be elected.)

Undergraduates' Society in Applied Science.

OFFICERS 1919-20.

Hon. President—Dr. J. B. Porter.
President—C. A. Buchanan, '19.
Vice-President—R. H. Patten, '19.
Secretary—H. L. Mahaffy, '20.
Treasurer—J. R. Dunbar, '20.
Asst. Treasurer—J. M. Cuddy, '21.

Undergraduates' Society in Law.

OFFICERS 1919-20.

President—M. Versailles.
Vice-President—G. G. Anglin.
Secretary—J. O. Gallery.
Treasurer—Mrs. W. P. Hughes.

Medical Society.

(No list of Officers received.)

Philosophical Society.

OFFICERS 1919-20.

Hon. President—Dr. J. W. A. Hickson.
Hon. Councillors—Dr. W. Caldwell. Dr. W. Tait.
President—O. Klineberg, B.A.
Vice-President—R. J. Clarke, B.A.
Secretary—L. A. Spetber, '21.
Treasurer—S. Wiseman, '20.

Chemical Society.

OFFICERS 1919-20.

President—Mr. E. G. Young, B.A.
Secretary-Treasurer—Mr. G. S. Whitby.
Executive Commitee—Dr. A. Stansfield, Dr. L. V. King, Mr. O. Maass, M.Sc.

Mining Society.

(No list of Officers received.)

Physical Society.

OFFICERS 1918-19.

President—Mr. H. E. Reilley, M.Sc.
Vice-President—Dr. A. N. Shaw.
Secretary—R. J. Clark, B.A.
Executive Committee—The above named officers, with Dr. R. F. Ruttan, Dr. L. V. King, Mr. James Weir, B.Sc.

Historical Club.

OFFICERS 1919-20.

Hon. President—D.. C. E. Fryer.
President—B. N. Holtham, B.A.
Vice-President—J. R. Ritchie, B.A.
Treasurer—James Grier, B.A.
Secretary—A. W. Stuart, B.A.

Advisory Committee—Dr. C. E. Fryer. Georges Grosjean, B.A. A. I. Smith, B.A.

Electric Club.

(No list of Officers received.)

Railway Mechanical Club.

OFFICERS 1919-20.

Hon. President—Prof. A. R. Roberts.
President—C. Shapter, Sci. '20.
Sec.-Treas.—W. R. Wonham, '22.
Representative—C. V. Vessot, '20.

Political Economy Club.

President—P. Presner.
Vice-President—B. Joseph.
Secretary—J. K. Mergler.
Treasurer—B. N. Holtham.
R.V.C. Representative—Miss I. L. McDonald.

Cercle Francais.

OFFICERS 1919-20.

Hon. President—Dr. Paul Villard.
President—G. F. Grosjean, B.A.
Vice-President—G. H. Phillimore, Law '21.
Secretary—M. I. Raphael, Arts '21.
Treasurer—J. I. Schleifstein, Arts '21.

Societe Francaise.

OFFICERS 1919-20.

Hon. President—Mlle. L. Touren.
President—Eileen M. Wall.
Vice-President—Dorothy Mathewson.
Secretary-Treasurer—Doris Sharples.
Reporter—D. Mathewson.
Representatives—Fourth Year, Grace Moody; Third Year, Alice Sharples; Second Year, Louise Weibel.

Delta Sigma Society.

OFFICERS 1919-20.

Hon. President—Mrs. W. Vaughan.
Hon. Vice-President—Miss V. Brown.
President—D. Mawdsley.
Vice-President—E. Holland.
Secretary-Treasurer—R. Shatford.
Representatives—Fourth Year, G. Ewing; Third Year, K. Godwin; Second Year, E. McPartlin.
Poster Representative—H. Nichol.

Young Men's Christian Association of McGill.

All members of McGill University, and of the affiliated Colleges, are welcomed as Associate Members; the active membership comprises those who are church members, or who subscribe to a simple statement of faith, and approve the objects of the Association.

The home of the Association is Strathcona Hall, which, in addition to affording ample accommodation for the work of the Association as a whole, provides residence for sixty-seven men.

Full particulars regarding the work of the Association are given in the annual Hand Book, and will also be supplied by the General Secretary.

OFFICERS 1919-20.

Hon. President—Mr. W. M. Birks.
President—W. D. S. Jamieson, Med. '21.
Vice-President—W. deM. Scriver, Med. '21.
Rec.-Secretary—C. A. McIntosh, Arts '21.
Assoc. Sec. and Treas.—H. Nichol.
Asst.-Treas.—O. F. Beamish, Med. '21.
Acting-Secretary—R. de Witt Scott, B.A.
Directors—M. Kinsman, Med. '22; N. E. Peterson, Arts '20; T.G. Browne, Med. '21; H. Cousens, Arts '22; W. L. Crewson, Med. 21; R. R. Fitzgerald, Med. '22; C. P. McLean, Med. '22; R. Brow, Med. '20; L. Wiggs, Sci. '20; A. L. Walsh, Dent. '20.

Young Women's Christian Association of McGill University.

OFFICERS 1919-20.

Honorary President—Mrs. F. D. Adams.
President—Helen Nichol, '20.
Vice-President—Jean Robson, '21.
Recording Secretary—Thelma Rough, '22.
Corresponding Secretary—Shirley MacRae, '22.
Treasurer—Isobel Millen, '22.

CONVENERS OF COMMITTEES.

(To be elected next session.)

Royal Victoria College Athletic Association.

OFFICERS 1919-20.

Hon.-President—Miss Lichtenstein.
Honorary Adviser—Miss E. M. Cartwright.
President—Queenie Savage.
Vice-President—Eva Ross.
Secretary-Treasurer—Mary Fry.
Basket Ball Manager—Grace Moody.
Tennis Manager—M. McDougall
Hockey Manager—Hazel Davidson.
Fancy Skating Manager—Isabel Imrie.
Sports Manager—Helen Nichol.

Athletic Association.

OFFICERS 1919-20.

President—G. A. Parkins.
Vice-President—L. C. Montgomery.
Secretary—H. Fisk

Rugby Football Club.

OFFICERS 1919-20.

Hon. President—Geo. Macdonald, B.A.
President—L. C. Montgomery.
Hon. Treas.—Dr. Argue.
Vice-Pres.—N. T. Williamson.
Secretary—J. Copeland.
Treasurer—P. Seath.

Swimming Club.

OFFICERS 1919-20.

Hon. Pres.—S. S. Pitt, Sci. '19.
President—G. H. Fisk, Sci. '22.
Vice-Pres.—J. C. Elder, Sci. '20.
Secretary—G. G. Millar, Med. '22.
Treasurer—J. Notman, Sci. '22.
Med. Rep.—W. Laishley, Med. '22.
Arts Rep.—G. M. Webster, Arts '22.
Sci. Rep.—J. C. Lyall, Sci. '22.

Lawn Tennis Club.

OFFICERS 1919-20.

Honorary President—Lieut. George Laing.
President—H. M. Young, Med. '19.
Vice-President—R. L. Kramer, Med. '20.
Secretary-Treasurer—C. S. Hornbeck, Med. '21.

Harriers' Club.

(No list of Officers received.)

Ski Club.

OFFICERS 1919-20.

President—H. B. Wilder, Sci. '22.
Vice-President—A. Glen, Sci. '21.
Secretary—D. Anderson, Arts '22.
Treasurer—W. Macklaier, Arts '22.

Hockey and Skating Club.

OFFICERS 1919-20.

Hon. President—Capt. L. Roberts.
President—E. J. Behan.
Vice-President—J. Gallery.
Sec.-Treas.—D. Dawes.
Representatives—Medicine:—V. Lapp.
Science:—J. Notman.
Arts & Law:—F. McGillis.

Track Club.

OFFICERS 1919-20.

Hon. President—Major Harold Stanley.
President—J. L. O'Brien, Arts '20.
Hon. Sec.-Treas.—Lieut. Hugh Crombie.
Vice-Pres.—R. L. Hamilton, Med. '23.
Sec.-Treas.—W. R. Kennedy, Arts '22.

Boxing, Fencing and Wrestling Club.

(No list of Officers received.)

Western Club of McGill University.

(*Ceased activities until after the war.*)

The Club has for its objects the furthering of the interests of McGill in the four Western Provinces and the helping of new students to McGill from these Provinces.

Students from Manitoba, Saskatchewan, Alberta, or British Columbia, coming to McGill for the first time, are requested to communicate with the Secretary of the Club, care The Union, McGill University, Montreal.

Eastern Townships Club.

(No list of Officers received.)

The Maritime Club of McGill University.

The objects of this Club, which was formed eight years ago by the amalgamation of the Nova Scotia and New Brunswick and Prince Edward Island clubs, is to promote in every way possible, the best interests of students coming to McGill from the Maritime Provinces and Newfoundland. Such students are urgently requested to communicate with the Secretary of the Club, who will be glad to render them all assistance in his power.

(No list of Officers received.)

American Club.

(No list of Officers received.)

McGill University Oriental Society.

(No list of Officers received.)

Graduates' Society of McGill University.

OFFICERS 1919-20.

President—Major George Macdonald, B.A. M.C.
Vice-Presidents—J. A. Micholson, M.A. L.L.D., Col. J. M. Elder, B.A. M.D. and Prof. Nevil Norton Evans, M.Sc.
Treasurer—W. W. Robinson, M.A.
Secretary—G. T. Hyde. B.Sc., 14 Phillips Sq., Montreal
Executive Secretary—John W. Jeakins, B.A.

Alumnae Association of McGill University.

OFFICERS 1918-19.

President—Mrs. A. R. Howell, B.A.
1*st Vice President*—Miss G. Hunter, B.A.
2*nd Vice-President*—Miss V. L. Brown, M.A.
3*rd Vice-President*—Mrs. J. H. Norris, B.A.
4*th Vice-President*—Miss I. Pearl Leslie, B.A.
Corresponding Secretary—Miss E. P. Henry, B.A.
Asst.-Corresponding Secretary—Mrs. Arthur Crompton, B.A.
Recording Secretary—Miss H. M. Goldstein, M.A.
Asst.-Recording Secretary—Miss M. Hay, B.A.
Treasurer—Miss A. Muriel Gillean, B.A.
Assistant-Treasurer—Mrs. Wakefield, B.A.

Applied Science Graduates of McGill University.

The object of this organization is to keep the Applied Science Graduates in touch with one another and with their Alma Mater. This is accomplished mainly through the medium of "The Bulletin," published twice a year, and containing, among other things, alphabetical , chronological and geographical lists of the Graduates, Class News and College News.

New York Graduates' Society.

OFFICERS 1919-20.

President—W. W. Colpitts, Sci. '99.
1*st Vice-President*—F. G. Wickware, Sci. '06.
2*nd Vice-President*—Robert MacDougall, Arts '90
Secretary—W. H. Donnelly, Med. '03.
178 Woodruff Ave., Brooklyn, N.Y.
Treasurer—O. S. Hillman, Med. '06.

GOVERNORS.

1920 CLASS—{W. E. Deeks, Med. '93.
R. A. Weagant, Sci. '05.

1921 CLASS—{Frank Miller
H. George Schwartz, Med. '98.

1922 CLASS—{J. L. Joughin, Med. '06
D. S. Likely, Med. '05.

NON-RESIDENT COUNCILLORS

Prof. J. C. Bracq, Arts '81, Poughkeepsie, N. Y.; Dr. C. J. Patterson, Med, '86, Troy, N. Y.; Dr. J. B. Harvie, Med. '81, Troy, N. Y.; Mr. R. O. King, Sci. '95, Buffalo, N. Y.; Mr. T. H. Addie, Sci. '02, Wilmington, Del.; Dr. E. W. Smith, Med. '82, Meridon, Conn.

Ottawa Valley Graduates' Society.

OFFICERS 1919-20.

Honorary President—Sir James Grant, M.D., K.C.M.G.
President—A. W. Duclos, B.A., B.C.L.
Vice-Presidents—J. B. McRae, B.Sc.; O. S. Finnie, B.Sc., D.L.S.; F. W. Mohr, M.D.
Secretary—Gordon McL. Pitts, M.Sc., 323 Somerset St. Ottawa.
Treasurer—Frederic E. Bronson, B.Sc.
Executive Committee—C. H. Brown, B.A., M.D.; J. Blizard; Gordon G. Gale, M.Sc.; S. Hadwen, D.V.S.; F. E. Buck, B.S.A.;

McGill Alumni Association of Chicago.

(No list of Officers received.)

McGill Graduates' Society of Honan, China.

(No list of Officers received.)

McGill Graduates' Society of Manitoba.

(No list of Officers received.)

McGill Graduates' Society of British Columbia.

OFFICERS 1919-20.

Hon. President—Dr. R. E. McKechnie.
President—Mr. D. E. McTaggart, B.A.
Vice-President—Mr. J. S. Gordon, B.A.
Secretary-Treasurer—Mr. W. H. Powell, B.Sc.
Executive—Dr. F. A. McLennan, Dr. F. W. Brydone-Jack, Dr. F. G. Logie, Major F. A. Wilkin, B.Sc. and Mr. P. W. Racey, B.Sc.

District of Bedford McGill Graduates' Society.

Honorary President———————————
President—Dr. N. M. Harris, Knowlton, P.Q.
Vice-President for Missisquoi County—Dr. G. F. L. Fuller.
Vice-President for Brome County—Dr. A. C. Paintin.
Vice-President for Shefford County—Dr. J. A. Corcoran.
Secretary-Treasurer—Rev. Ernest M. Taylor, M.A., Knowlton, P.Q.

McGill University.

SESSIONAL EXAMINATIONS, 1918-1919.

Faculty of Arts.

FOURTH YEAR (GRADUATING CLASS).

PASSED FOR THE DEGREE OF B.A.

In Honours.

(Subjects arranged alphabetically.)

1. In Classics.

Lieut. Francis C. Dobell.....First Class Honours and Henry Chapman Gold Medal.

2. In Chemistry.

Graham, Elsie.....First Class Honours.
Dougall, Dorothy... } equal.....Second Class Honours.
Booker, Hanford K.. }

3. In Economics and Political Science.

Levy, John.....First Class Honours.
Macdonald, I. Louise.....First Class Honours.
Lieut. Graham F. Towers.....First Class Honours.
Holtham, Bartley N.... }
Ritchie, John R..... } equal....Second Class Honours.
Smith, Arthur I..... }
Lieut. Henry A. Aylen.....On Active Service.
Corp. Bernard Joseph.....On Active Service.

4. In English and History.

Hague, Helen.....First Class Honours.
Pickel, Margaret B.....First Class Honours.
Craig, Gwyneth L.....First Class Honours.
Morgan, Nora S. F.....Second Class Honours.
Grindley, Fannie M.....Second Class Honours.

5. In English and French.

Abbott, Elizabeth E.....First Class Honours.

6. In English and Greek.

Noad, Algy S.....First Class Honours.

7. In English and Latin.

Basnar, Florence E. . . . . Second Class Honours.

8. In Modern Languages.

Monk, Elizabeth C. . . . . First Class Honours and Governor General's Gold Medal.

Mergler, Joseph K. . . . . First Class Honours and Alliance Francaise Pr ze.

9. In Philosophy.

Klineberg, Otto. . . . . First Class Honours and Prince of Wales Gold Medal.

First Class General Standing.

McGregor, Pheobe L. . . . . } equal... Special Certificate.
Paterson-Smyth, Jessie. . . }

Mitchell, Beatrice M. . . . . Special Certificate.

PASSED FOR THE DEGREE OF B.A.

IN THE ORDINARY COURSE

(In order of merit.)

Class I. McGregor, Phoebe L. } equal.
Paterson-Smyth, Jessie. }
Mitchell, Beatrice M.

Class II.
Young, Marion T.
Banfill, Gladys M.
Rogers, Ruth.
Grier, James.
Swindlehurst, Ellen L.
Wright, Annie E.
Livingstone, S. Gladys.
Stuart, Albert W.
Salomon, Ruth.
Cruikshank, N. Leslie.
Reid, Isabel E.
Fritz, Madeleine A.

Class III.
Smart, R. A. Grant.
Baker, E. Bertha.
Lindsay, Marion K.
Giles, Lila F.

Unranked. Gray, Ethel M.

STUDENTS IN ARTS QUALIFIED TO OBTAIN THE DEGREE OF B.A. ON THE GROUND OF ACTIVE SERVICE.

Lieut, Henry A. Aylen.
Pte. Leslie F. Bennett.
Lieut. Colin I. Brown.
Lieut. J. J. Harold, M.C.
Gnr. Reginald W. Herring.
Capt. J. A. Lalanne, M.C. and Bar.
Corp. Bernard Joseph.

DOUBLE COURSE STUDENT IN ARTS AND MEDICINE QUALIFIED TO OBTAIN THE DEGREE OF B.A.

Bernstein, Felix.

DOUBLE COURSE STUDENTS IN ARTS AND MEDICINE QUALIFIED TO OBTAIN THE DEGREE OF B.A. ON COMPLETION OF THE SECOND YEAR IN MEDICINE.

Davis, Archie.
Goldwater, Ephraim.
Golt, Moses I.
Lipsey, Hyman.
Usher, Barney D.

DOUBLE COURSE STUDENT IN ARTS AND APPLIED SCIENCE QUALIFIED TO OBTAIN THE DEGREE OF B.A.

Proudfoot, David G.

PASSED FOR THE DEGREE OF B.SC. (IN ARTS.)

IN THE ORDINARY COURSE.

(In order of merit.)

Class I. None.

Class II. Maclennan, Agnes H. B.
Gibbs, Mary.

Class III. None.

DOUBLE COURSE STUDENTS IN ARTS (B.SC. COURSE) AND MEDICINE QUALIFIED TO OBTAIN THE DEGREE OF B.SC. ON COMPLETION OF THE SECOND YEAR IN MEDICINE.

Fitzgerald, Ralph R.
Mills, Edward S.
Rothschild, David.

THIRD YEAR.

HONOURS.

B.A. COURSE.

(Subjects arranged alphabetically.)

1. In Chemistry.

Hill, Eleanor M.....
Rorke, E. Christine.. } equal.....First Class Honours.
Roston, Lucille.....
Davidson G. Hazel.....Second Class Honours.
Goddard, Mabel A.....Second Class Honours.

2. In Economics and Political Science.

Nichol, Helen R. H.....Second Class Honours and First Mackenzie Scholarship.

3. In English and History.

Nichol, Jean.....First Class Honours.
Freedman, Lewis K.....First Class Honours.

4. In English and French.

Novick, Fanny.....Second Class Honours.
Moody, M. Grace H.....First Class Honours in English and Third Class Honours in French.

5. In English and German.

Meyer, Bertha.....Second Class Honours in German and Third Class Honours in English.

6. In English and Philosophy.

Mawdsley, Mary D.....First Class Honours.
Wiseman, Solomon.....First Class Honours.

7. In Latin and French.

Wall, Eileen M.....Second Class Honours in Latin and Third Class Honours in French.

HONOURS.

B.SC. COURSE

1. In Chemistry.

Shaw, Thomas P. G.....Second Class Honours

PASSED THE THIRD YEAR EXAMINATIONS.

1. For Course Leading to B.A.

(Arranged in alphabetical order.)

Davidson, DiFlorio (s), Duncan, Ewing, Freedman (L.K.), Goddard, Henry, Hill, Imrie, McDougall (s), MacKinnon, McMillan (H.), McMillan (M), Mawdsley, Meyer, Moody, Nichol (H.R.H.), Nichol (J.), Novick, O'Brien (s), Peterson (N.E.), Rorke, Roston, Savage, Scott, Townshend (s), Wall, Wilson, Wiseman.

2. Double Course in Arts and Medicine (B.A., M.D.).

(On completion of the First Year in Medicine.)

Evans, Knowlton, Somerville.

3. For Course Leading to B.Sc.

Charlton, Shaw.

(s) Supplemental in one subject.

4. Double Course in Arts (B.Sc.) and Medicine (B.Sc., M.D.).

(On completion of the First Year in Medicine.)

Freedman (N.B.), Petersen (J.N.), Rubin, Silver.

SECOND YEAR.

PRIZES.

Barnes, Doris S. and Barnes, Edith L., equal..Coster Memorial Prize.
Craig, Ruth D.....Annie Macintosh Prize.
Curtis, G. Spurgeon.....Neil Stewart Prize.

PASSED THE SECOND YEAR EXAMINATIONS.

1. Course Leading to B.A.

(a) IN HONOURS.

In Mathematics and Physics.

Mc Pherson, Anna I.....Second Class Honours.

(b) IN THE ORDINARY COURSE.

Class I.
Holland.
Craig.
Cockfield.
Barnes (D.S.) and Barnes (E.L.) and Schleifstein, equal.

Class II.
Spier.
Larkin.
Raphael.
Godwin.
Davidson.
Harvey.
Mills.
Kern, (L. W.)
Kern, (M. J.)
Sperber.
Cameron.
Hooper.
McIntosh.
Curtis.
Breitman.
Contant.
Garrow.

Class III.
Rowat (s)
Campbell.
Macdiarmid and Teitelbaum, equal.
Borden.
Franklin.
Gillespie.
Husk.
Sharples (s).
Foster.

(s) Supplemental in one subject.

Deery (s).
Ford.
Savage (s).
Echenberg (s).
Hebert (s).
Boyce (s).
Vineberg (s).
Lewis (s) and Reid (R.) (s), equal.
Higginson (s).

2. Double Course B.Sc., M.D.

(On completion of certain Medical Subjects.)

Freedman, Kay, Mirsky, Robinovitch [J.].

3. Course Leading to B.Com.

Class I. Badian.
Class II. Shapira (W.).
Levitt.

Class III. Mac Donald.

FIRST YEAR.

PRIZES.

Fry, Mary I.....Annie McIntosh Prize.

PASSED THE FIRST YEAR EXAMINATIONS.

1. Course Leading to B.A.

Class I. Kerr.
Fry.
Reid (Janet).
Weibel and Patton, equal.
Shatford.
Macklaier.

Class II. Elliot.
Anderson.
Harris.
McGoun.
Willis.
Holloway.
Pierce (s).
Foley.
Macrae (D.).
Banfill.
Avison and Miller (J. M.), equal.
McDonald (A. C.).
Werry.
McPartlin.
Ross.

(s) Supplemental in one subject.

Class III. Alexander (K.).
Henderson.
Klineberg.
Addy.
Johnson (A. S.) and Rohrlich, equal.
Sharples (s).
Tuffy (s).
Moore.
Murray (S. G.) (s).
Goldman.
Rough.
Howell and Mansfield (s), equal.
Tait (s).
Bullock (s).
Riley (s).
Peterson (s).
Fraser (C. H.) (s).
Brown (F. T.) (s).
Higinbotham (s).
Joseph (s).
Teggart (s).
Medbury (s).
Cousens (s) and McDougall (J. M.) (s), equal.
Gillies (s) and Smith (A.V.) (s), equal.
Cahana (s).

2. Course Leading to B.Sc.

Class I None.

Class II. Steine.
Levy.
Zuckerman.
Wilson (C. R.).

Class III. Gradinger and Wolepor, equal
Millen (s).
Kennedy (s).
Hibbard
Scheffer (s).
Bieler (s).
Alexander (B.) (s).
Kanigsberg (s).

PASSED THE FIRST YEAR EXAMINATIONS.

3. Course Leading to B.Sc. in Agriculture.

Class I. None.

Class II. None.

Class III. Burke (s).

(s) Supplemental in one subject.

4. Course Leading to B. Com.

Class I. None.

Class II. Laffoley.
Rutherford (s).
Johnson (A. W.).
Blackman.

Class III. Shapira (s).
Dougall (s).

STANDING IN THE SEVERAL SUBJECTS.

(Arranged alphabetically in order of Departments.)

DEPARTMENT OF BOTANY.

Course 2.

Class I. Godwin.
Spier.
Higginson.

Class II. None.

Class III. Burke and Donald, equal.
Rabinovitch.

Course 5.

Class I. Maclennan

Class II. Boyd.
McDougall.

Class III. None.

DEPARTMENT OF CHEMISTRY.

Course 1

Class I. Larkin.
Salomon.
Barnes (E. L.).
Spier.
Kern (L. W.) and Millen, equal.
Kern (M. J.) and Steine, equal.
Scheffer.

Class II. Levy.
Godwin.
Bieler and Mills, equal.
Reid (H. E.) and Smith, equal.
McPherson.
Zuckerman.
Contant.
Kennedy.
Macdiarmid.
Alexander and Wolepor and Willson, equal.
Gradinger.

(s) Supplemental in one subject.

Class III. Davidson and Wilson (C. R.), equal.
Clarke and McCulloch.
Simon.
Deery and Presner.
Heatherington.
Hill and Reid (R. V.), equal.
Kanigsberg.
Cameron.
Campbell and Ford and Hibbard and MacIntosh, equal.
Higginson.
Ross.
Pratt.
Burke.

Course 2.

Class I. Roston.
Peterson (J. N.)
Rorke.
Freedman (N. B.).
Rubin.
Foran and Hill, equal.

Class II. Silverman.
Davidson.
Demaray.

Class III. Goddard.
Rabinovitch.
Donald.
Hemming.

Course 3a.

Class I. Hill.
Rorke.
Roston.
Hemming.
Mirsky.

Class II. Goddard.
Rabinovitch and Donald, equal.
Irwin.
Foran.
Davidson.

Class III. Kay.
Gauvin.
Freedman (J.).
Ford (K. M.).

Course 3b (First Term).

Class I. McGlaughin.
Shaw.

Class II. None.

Class III. None.

Course 3b (Second Term).

Class I.	Mirsky. Hill. Phillips. Rorke. Davidson.
Class II.	Roston. Goddard. Rabinovitch. Hemming. Donald and Freedman (J.), equal.
Class III.	Ford (K. M.). Gauvin Kay.

Course 3 (b) Advanced.

Class I.	McGlaughlin. Shaw.
Class II.	None.
Class III.	None.

Course 4.

Class I.	Rorke and Roston, equal. Rubin. Freedman (N. B.). Petersen. Hemming and Hill, equal.
Class II.	Davidson. Silver. Demaray.
Class III.	Goddard.

Course 5.

Class I.	Graham.
Class II.	None.
Class III.	None.

Course 6 (First Term).

Class I.	Graham.
Class II.	None.
Class III.	None.

Course 6 (Second Term).

Class I. McGlaughlin.

Class II. Shaw.
Dougall.

Class III. Booker.
Gibbs.
Charlton.

Course 7.

Class I. FitzGerald.

Class II. Mills.
Rothschild and Booker and Dougall, equal.
Shaw and McGlaughlir, equal.

Class III. None.

Course 8.

Class I. None.

Class II. Booker.
Dougall and Maclennan, equal.
Gibbs.

Class III. Charlton.
Galley.

Course 9.

Class I. Maclennan.
Booker.

Class II. Charlton and Dougall, equal
Shaw.
McGlaughlin.

Class III. Rabinovitch (B.).

Course 10.

Class I. Graham.

Class II. None.

Class III. Maclennan.

Course 13

Class I. Graham.

Class II. None.

Class III. None.

Course 15.

Class I. Graham.

Class II. None.

Class III. None.

DEPARTMENT OF CLASSICS.

Greek: Course 1.

Class I. Shatford.

Class II. Fraser and Miller, equal.

Class III. None.

Greek: Course 3.

Class I. Kerr.

Class II. Murray.

Class III. Curtis.
Morrison.
Cousens.

Greek: Course 4.

Class I. Holland.

Class II. None.

Class III. None.

Greek: Course 6.

Class I. Noad.
Dobell.

Class II. None.

Class III. None.

Greek: Course 8.

Class I. Dobell and Noad, equal.

Class II. None.

Class III. None.

Latin: Course 1.

Class I. Kerr.
Shatford.
Patton.
Harris and Reid, equal.
Weibel.
Macklaier.
Sharples.

Class II. Anderson and Fry, equal.
McPartlin.
Elliot.
Shea.
Foley.
Holloway and Perry, equal.
McDonald (A. C.) and Riley, equal.
Alexander.
Macrae (D.) and Ross and Tuffy and Werry, equal.
Peterson.
Banfill and McGoun and Willis, equal.
Murray (S. G.).

Class III. Avison and Joseph and Miller and Rohrlich, equal.
Vineberg.
MacRae (S.) and Pierce, equal.
Tait.
Johnson and Klineberg, equal.
Addy and Gillies and Rough, equal.
Mansfield and Smith (A. V.), equal.
Fraser (C. H.) and Palmer, equal.
Brown and Henderson and Rogers, equal.
Goldman and Lidstone and Rapp, equal.
Teggart.
Leslie.
Moore.
Bagley and Howell and McDougall (J. M.) and Zealand, equal.
Rosenstein.
Mathewson.
Cahana.

Latin: Course 2.

Class I. Holland.
Craig.
Cockfield.
Barnes (D. S.).

Class II. Harvey and Mills, equal.
Davidson.
McPherson and Rowat and Schleifstein, equal.
Larkin.
Hooper.
Barnes (E. L.) and Spier, equal.
Cameron and Campbell, equal.
Breitman.
Deery and McIntosh (C. A.) and Raphael and Thornton, equal.

Class III. Godwin.
Silverman.
Garrow.
Teitelbaum.
Contant.
Borden and Lewis, equal.
Bishop and Kern (M. J.) and Husk and Reford and Sperber, equal.
Macdiarmid.
Echenberg and Fitzsimons and Gillespie, equal.
Franklin and Savage, equal.
Sharples.
Ford and Kern (L. W.), equal.
Foster.
Reid and Ross, equal.

Latin: Course 4.

Class I. Dobell.

Class II. Wright.
Basnar.

Class III. Wall.
McKinnon.

Latin: Course 6.

Class I. Dobell.

Class II. Basnar
Wall

Class III. None.

DEPARTMENT OF ECONOMICS AND POLITICAL SCIENCE.

Course 1.

Class I. Holland.
Kern (L. W.).
Barnes (D. S.).
Mills.
Cockfield.
Barnes (E. L.) and Garrow, equal.
Kern (M. J.) and Raphael, equal.

Class II. Schleifstein.
Cameron and Gillespie and Macdiarmid, equal.
Breitman and Hooper, equal.
Hibbard.
Sperber and Craig, equal.

Class III. Rowat.
Bishop and Townshend, equal.
Boyce.
Davidson and Robson, equal.
Borden.
Franklin and MacKinnon, equal.
Ross.
Husk.
Teitelbaum and McCaig, equal.
Armstrong.
Rountree and McIntosh and Lalanne, equal.

Course 2.

Class I. Towers.

Class II. Nichol (H. R. H.).
O'Brien.

Class III. Duncan.
Harold.
Henry.
Stuart.
Nicoll.

Course 3.

Class I. McGregor.
Towers.
Ewing and Paterson-Smyth, equal.

Class II. Imrie.
Townshend and Harold and Lalanne, equal.
Henry.

Class III. Nichol (H. R. H.) and Nicoll, equal.
McDougall.
Wilson.

Passed Gray.

Course 4.

Class I. Levy.
Macdonald.

Class II. Holtham.
Nichol (H. R. H.).
Smith.
Rogers.
Duncan and Smart, equal.

Class III. Ritchie.
Towers.
Baker.
Boyd.

Course 5.

Class I. Ritchie.
Levy.

Class II. Macdonald.
Towers.
Holtham.
Smith.

Class III. Nichol (H. R. H.).
Duncan.

Course 10.

Class I. Levy and Macdonald, equal.
Pickel.
Stuart.
Smith.

Class II. Smart.
Ritchie.
Holtham and Rogers, equal.
Gibbs.
Livingstone.
Swindlehurst.

Class III. Cruikshank.

aegrotat: Paterson-Smyth

Course 11.

Class I. Levy.

Class II. Ritchie.
Rogers
Macdonald.
Holtham.
Smith.

Class III. None.

Course 12.

Class I. Levy.
Klineberg and Macdonald, equal.

Class II. Swindlehurst.
Holtham.
Gibbs and Smith, equal.

Class III. Baker and Boyd, equal.
Smart.
Ritchie.

DEPARTMENT OF EDUCATION.

Course 1.

Class I. None.

Class II. Basnar.
Banfill.
Rorke.

Class III. Giles and Duncan, equal.
Novick and Baker, equal.
Cruikshank and Pickel, equal.
Fritz.
Goddard.
Boyd.
Mergler.
Lewis.
McGibbon.
McRae.

Course 2.

Class I. Klineberg.

Class II. Mitchell and Mawdsley, equal.
Young.
Savage and Wright, equal.
Wilson and Scott, equal.
Salomon and Levy and MacGibbon, equal.
MacKinnon.

Class III. Livingstone.
Younger and Baker, equal.
McMillan (H.).
Henry and Reid and McMillan (M.) and Boyd, equal.
Swindlehurst.
Reid (I.).
Dart.

DEPARTMENT OF ENGLISH.

Course 1.

Class I. Kerr.
Fry.
Weibel.
Avison and Macklaier and Patton, equal.
Shatford.
Peterson and Anderson and Holloway and Sharples, equal.

Class II. Murray (S. G.) and Shea and Willis, equal
Harris and Werry and Scheffer and Pitt, equal.
Addy and Moore and Steine and Alexander (K.) and Levy, equal.
McGoun.
MacKeen and Ross and Ayer and James and Millen, equal.
Stanway and Foley, equal,
Elliot.
Alexander (B.) and Goldman and McPartlin, equal.
McDougall (J. M.).

Class III. Clarke and Henderson, equal.
Bullock and Banfill and Joseph and McDonald, equal.
Higinbotham and Rapp and Gillies and Klineberg and MacRae (S. E.) and Reid and Tuffy, equal.
Copland and Fraser and Zuckerman and Burke and Brooke and Howell and Wilson (C. R.), equal.
Roper and Cahana and Kennedy and Wolepor and Janes and Macrae (D.) and Tait, equal.
Riley and Wilson (H. C.) and Teggart, equal.
Mathewson and Kanigsberg and Rohrlich and Smith (A. V.) and Brown and Hibbard, equal.
Bouillon and Gaboury and Leslie and Rough, equal.
Abbottsmith and Johnson and Ballantyne, equal.
Miller.
Bieler and Gradinger, equal.
Fitzmaurice and Mullin and Palmer and Gillingham, equal.
Perry.
Gualtieri.

Course II.

Class I. Fry and Shatford, equal.
Willis.
Levy and Pierce and Riley, equal.
Macklaier.
Kerr and Peterson, equal.
Harris and Werry, equal
Anderson.
Reid (J. L.).
James and McGoun, equal.
McPartlin and Millen and Weibel, equal.
Banfill and Holloway and Steine, equal.
Foley and Murray (S. G.) and Patton and Miller (J. M.), equal.
Rosenstein and Wolepor, equal.
Macrae (D.) and Perry, equal.

Class II. Wilson (C.).
Henderson and Sharples, equal.
Fraser (C. H.) and Pitt, equal.
McDonald (A. C.).
Alexander (K.) and Bullock and MacRae (S.), equal.
Alexander (B.) and Elliot, equal.
McCullough and Tuffy, equal.
Gillies and Goldman and Moore, equal.
Kennedy and MacKeen and Ross and Tait, equal.
Abbottsmith and Gradinger, equal.
Klineberg and Scheffer, equal.
Brown (F.) and McDougall (J. M.), equal
Mansfield.
Bieler and Howell and Lidstone and Smith (A.) and Wilson (H.), equal.

Class III. Janes.
Joseph and Palmer, equal.
Avison and Leslie, equal.
Brooke and Rapp and Smith (F. M.), equal.
Rough and Zuckerman, equal.
Jones.

Ayer and Shea, equal.
Teggart.
Bouillon and Gaboury and Rohrlich, equal.
Cahana and Gillingham and Higinbotham and Mathewson, equal.
Ballantyne and Hibbard and Roper and Zealand, equal.
Addy and Kanigsberg and Mullin, equal.
Whitmore.
Bagley and Ellison and Forsyth and Glickman and Mulligan, equal.
Clarke.
Smith (V. B.).
Stanway.
Fritz and McDougall (G. S.) and Webster (G. M.).

Course 3 (Men).

Class I. Mirsky.
Curtis and Kay. equal.

Class II. Raphael.
Sperber and Schleifstein and Marsh, equal.
Newnham and Servage, equal.
Rowat and Millen, equal.
Latham.
Kern (L. W.) and Morrison, equal.
Kern (M. J.) and Hooper, equal.

Class III. Pratt and Reford, equal.
Armstrong and Borden and Echenberg and Freedman, equal.
Franklin and Boyce and Breitman, equal.
McIntosh (C. A.).
Rountree and Teitelbaum and Clayton, equal.
Savage.
Reid.
McEwen.
Rabinovitch.
Hebert.

Course 3 (Women).

Class I. Holland.
Allen.
Davidson.
Godwin.
Craig.
Bishop.
Spier.
Barnes (D.) and Harvey, equal.

Class II. Cockfield.
Barnes (E. L.) and Cameron, equal.
McPherson.
Thornton.
Larkin.
Garrow and Sharples, equal.
Campbell.
Contant and Fitzsimons and Husk and Mills, equal.

Class III. MacDiarmid and Willson, equal.
Foster and Gillespie and Hill, equal.
Barnard and Deery and Lewis, equ al.
Silverman.
MacIntosh (H.) and Reid (R.), equal.
Simon.
Ford and Hemming and Robson, equal.
Irwin.
Higginson.

Course 4.

Class I. Holland.
Harvey and Larkin, equal.
Barnes (D. S.) and Cockfield, equal.

Class II. McIntosh (C. A.) and Cameron and Sharples, equal.
Craig and Davidson and Servage, equal.
Reid.
Teitelbaum.
Curtis and MacIntosh (H.), equal.
Kern (M. J.).
Hooper and Bishop and Marsh, equal.
Kern (L. W.).
Hèbert and Newnham, equal.

Class III. Campbell and Garrow and Husk, equal.
Reford and Contant and Foster and Robson, equal.
Silverman and Willson, equal.
Gillespie and Clayton, equal.
Boyce and Macdiarmid, equal.
Armstrong and Ford and Millen, equal.
Barnard.
Lewis.
Fitzsimons.

Course 5.

Class I. Nichol (J.).
Mawdsley.
Freedman.
Moody.

Class II. Wiseman and Ewing, equal.
Novick and Allen, equal.
Henry.
Peterson (N. E.).
Imrie and Smart, equal.
McMillan (M.) and Scott, equal.

Class III. McDougall.
McMillan (H.).
Meyer and Savage, equal.

Course 7.

Class I. Hague.
Mawdsley.
Pickel and Imrie, equal.
Craig and Morgan and Ewing, equal.

Class II. Savage.
McGregor.
McMillan (M.).
Fritz.
Livingstone and McMillan (H.), equal.
Giles.
Grindley.

Class III. None.

Course 9.

Class I. Moody.
Abbott.
Allen.
Nichol (J.).
Freedman.
Mawdsley.
Ewing.

Class II. McMillan (M.).
Wiseman.
Savage.
Scott and Smart, equal.
Imrie.
Meyer and Rogers, equal
Novick.

Class III. Ditchfield.
McMillan (H.).
DiFlorio.

Course 10.

Class I. Mitchell and Noad and Young, equal.
Nichol (J.).
Allen.
Salomon.
Swindlehurst.
Rogers.
Banfill.
Basnar.
Baker.
Abbott and McGregor, equal.
Younger.

Class II. Giles.
Cruikshank and Lewis and Paterson-Smyth, equal.
Reid (I.).
Wiseman.
Lindsay.
McGibbon.
McRae and Fritz and Freedman, equal.

Class III. None.

Course 12.

Class I. Noad and Livingstone, equal.
Reid (I.).
Mitchell.
Pickel.
Basnar.
Lindsay and Paterson-Smyth, equal.
Grier and Younger, equal.
Lewis.
Morgan.

Class II. MacGibbon.
Swindlehurst.
Cruikshank.
McRae.

Class III. None.

Course 13.

Class I. None.

Class II. Moody.
Novick.
Meyer.

Class III. None.

Course 14.

Class I. Abbott.
Noad.

Class II. Basnar.

Class III. None.

Course 17.

Class I. Nichol (J.).
Craig.
Pickel.
Hague.
Grindley and Swindlehurst, equal.

Class II. Young.
Basnar.
Grier.
Lewis (D. E.) and Morgan, equal.

Class III. MacGibbon.
Meyer.
Lindsay.
Younger.

Course 19.

Class I. Noad.
Abbott.
Pickel.
Banfill and Mitchell, equal.
Moody and Paterson-Smyth, equal.
Young.
Hague.
Mawdsley and Reid (I.), equal.
Livingstone.
Wiseman.
Cruikshank.
Scott and Lewis and Adair, equal.
Morgan.

Class II. Craig and Grindley, equal.
Novick.

Class III. DiFlorio.
McRae.

Course 22.

Class I. Hague.
Craig.
Freedman.

Class II. Livingstone and Grindley, equal.

Class III. None.

DEPARTMENT OF GEOLOGY.

Course 1.

Class I. Dart.
Ewing.
Scott.
Banfill.
McMillan (H.).
Craig and McMillan (M.), equal.
Duncan and Paterson-Symth, equal.

Class II. Reid (I.) and Wright, equal.
Bishop and Imrie and MacKinnon, equal.
Grier.
Stuart.
Irwin and Reid (J.) and Savage, equal.
Wilson (A. E.).
Charlton and Lindsay and Morrison and Peterson, equal.

Class III. Ditchfield.
DiFlorio.
Adair.

Course 2.

Class I. Young.
Mitchell and Fritz, equal.

Class II. Rogers and Gibbs, equal.
MacGibbon and Giles, equal.
Lewis.
Stuart.
Smart and Livingstone, equal.

Class III. Baker.
Boyd and McRae, equal.

Course 3.

Class I. Young and Fritz, equal.

Class II. Gibbs.
Giles.

Class III. None.

Course 4.

Class I. Young.

Class II. None.

Class III. Fritz.
Gibbs.
Giles.

Course 5.

Class I. Roston.
Davidson.

Class II. None.

Class III. Donald.
Ford (K. M.).

Course 6.

Class I. Davidson.
Ford.

Class II. Donald.
Roston.

Class III. None.

DEPARTMENT OF HISTORY.

Course 1.

Class I. Reid (J. L.).
McGoun.
Shatford.
Foley.
Kerr and Willis, equal.
Harris.
Fry.
Anderson.
Murray (S. G.) and Rosenstein, equal.
Brown.
Tuffy.

Class II. Holloway and Peterson and Riley and Wilson (H. C.), equal.
Patton.
Pierce.
Banfill and Cahana and Elliot and Macrea (D.) and Tait and Webster and Weibel, equal.
Alexander (K. N.) and Rohrlich, equal.
Joseph and Werry, equal.
MacKeen.
Brooke and Miller and Sharples, equal.
Johnson and Macklaier and Stanway, equal.
Lidstone.
Fitzmaurice and Glickman and Rough and Ross, equal.
Avison.

Class III. Bullock and McPartlin, equal.
MacRae (S.).
Fraser and Klineberg, equal.
Rapp.
Copland and Gillies, equal.
Shea and Smith, equal.
McDougall and Moore and Roper, equal.
Bouillon and Schafer and Whitmore, equal.
Mansfield and McDonald (A.), equal.
Addy and Henderson, equal.
Howell.
Perry and Teggart, equal.

Ayer and Jones, equal.
Goldman and Steinberg and Smith (A.), equal.
Higinbotham and Leslie, equal.
Ballantyne.

Course 2.

Class I. Schleifstein and Craig, equal.
Kern and Davidson, equal.
Raphael.
Holland.
Hooper.
Cockfield.
Garrow.
Kern (M. J.) and Breitman, equal.

Class II. Barnes (D. S.).
Sperber and Lalanne and Cameron, equal.
Teitelbaum and Fitzsimons, equal.
Sharples (A.).
Rowat and McIntosh, equal.
Reford and Husk, equal.
Borden and Savage, equal.
Boyce and McIntosh and Robson, equal.

Class III. Franklin and Harvey, equal.
Bishop and Willson, equal.
Macdiarmid.
Rountree.
Reid.
Hebert.
Echenberg.
Lewis.
Armstrong and McCaig, equal.

Course 3.

Class I. Freedman.
Nichol (J.).

Class II. Peterson.
O'Brien.

Class III. Wilson.
Lindsay.
McDougall.

Course 7.

Class I. Nichol (J.) and Peterson, equal.
Freedman and Adair, equal.
Swindlehurst and Duncan, equal.

Class II. Grier and Mitchell, equal.
Stuart.
DiFlorio.
McDougall and O'Brien, equal.

Class III. Wilson.
MacGibbon.
Reid (J.).
Reid (I).

Course 8.

Class I. Hague.
Craig.

Class II. Grindley and Morgan, equal.

Class III. None.

Course 9.

Class I. Hague.
Craig.
Pickel.
McGregor.

Class II. Rogers.
Morgan and Grindley, equal.
O'Brien.

Class III. Harold.
Fritz.
Nicoll (H.) and Giles, equal.

Course 10.

Class I. Holtham.
Smith.
Ritchie.

Class II. Stuart.
Smart.
Grier.

Class III. MacGibbon.
Younger.

Course 11.

Class I. Nichol (J.).
Freedman.
Craig.
Hague and Pickel, equal

Class II. McGregor.
Lindsay.
Livingstone.
Morgan.
Fritz.

Class III. Swindlehurst.
Smart.
Giles.
Grindley.
Reid (I.).
McRae.

DEPARTMENT OF MATHEMATICS.

Course 1: Algebra.

Class I. Kerr and Fry (M.), equal.
Avison.
Macklaier.
Elliot and Henderson, equal.
Whitmore and Moore, equal.

Leslie and Millen, equal.
Shea.
Ross (J. B.) and Rutherford, equal.
Addy.
Kennedy and Rosenstein and Rohrlich and Zealand and Holloway, equal.

Class II.

Pierce.
Reid.
Mulligan and Kanigsburg, equal.
Miller and Banfill and Wilson (C. R.), equal.
Shapira (J.) and MacKeen and Abbottsmith and Lafolley, equal.
Fraser (C. H.) and Levy, equal.
Steine and Johnson (A. G.) and Harris and Willis and Macrae (D.), equal.
Blackman and Gittleson and Gaboury and Sharples, equal.
Alexander (K.).
McCulloch.
Zuckerman and Murray (S. G.) and Alexander (B.), equal.
Johnson (A. W.) and Peterson and Shatford, equal.

Class III.

Anderson.
Bouillon.
Burke and Fitzmaurice and McPartlin and Brown (F. T.), equal.
Rapp.
Gradinger and Rogers, equal.
Patton.
Scheffer and McGoun, equal.
Lidstone and Mansfield and Howell, equal.
Werry and Bullock and McDonald (A.), equal.
Hibbard.
Wolepor and Joseph, equal.
Tait and Goldman, equal.
Friedman.
Dougall (G.) and Roper and Bagley, equal.
Riley.
Ellison and Copland and Cousens and Ruel and Schafer and Wilson (H. C.) and Rough and Teggart and Klineberg, equal.

Course 1: Geometry.

Class I.

Avison and Kerr and Tait, equal.
Macrea (D.).
Alexander (K. N.) and Fry and Reid and Patton, equal.
Fitzmaurice.
Harris and Pierce and Wilson (C. R.), equal.
Addy and Elliot, equal.
Murray (S. G.) and Willis and Holloway, equal.
Macklaier and Peterson and Leslie, equal.
Levy.

Class II.

Abbottsmith and Lidstone and McDonald (A. C.) and Hibbard and Dougall, equal.
Cousens and Mathewson (C.) and Miller and Glickman and Rohrlich and Johnson (A. W.) and Laffoley, equal.

Bullock and Shea and Smith (V. B.) and Alexander (B.) and Gradinger and Wheatley and Anderson and Rapp and McGoun, equal.
McPartlin.
Lummis and Steine, equal.
Copland and Ellison and Gaboury and Kennedy and Wolepor and Goldman and Howell and James, equal.
Sharples.
Stanway and Rutherford and Henderson, equal.

Class III. Brown.
Johnson (A. S.).
Moore and Roper and Smith (F. M.) and Teggart, equal.
Werry and Blackman and Friedman and Rough, equal.
Fraser (C. H.).
Rogers.
Whitmore and Caron and Banfill and Wilson (H. C.), equal.
Bouillon and Ross (J. B.) and Schafer and Kanigsberg and McCulloch and Scheffer and Zuckerman and Klineberg, equal.
MacKeen.
Mansfield.
Millen.
Webster (G. M.) and Shatford.
Murray (J. W.) and Lefkowitz and Hetherington and Mathewson (D.), equal.

Course 1: Trigonometry.

Class I. Reid.
Laffoley.
Elliot.
Fry.
Henderson.
Willis.
Pierce.
Kennedy and Macrae (D.), equal.
Whitmore and Steine, equal.
Rutherford and Holloway, equal.
Ross (J. B.).
Macklaier.
Kerr.
Rohrlich and Millen, equal.

Class II. Alexander (K. N.).
Moore and Anderson, equal.
Avison and Hibbard and Badian, equal.
Johnson (A. S.) and Levitt, equal.
Banfill.
Miller and Burke, equal.
Patton.
Gaboury and Gradinger and Johnson (A. W.), equal.
Harris.
Werry and Blackman, equal.

Class III. Mansfield.
McGoun.
Brown (F. T.) and Wilson (C. R.), equal.
Rosenstein and Tait, equal.
Zuckerman and Dougall (G. E.), equal.

Barrett and Smith (V. B.) and Zealand and MacDonald. (F. M.), equal.
Rogers and Shatford, equal.
Cousens and Rapp, equal.
Addy.
Abbottsmith and Shapira and Howell, equal.
Goldman.
Friedman and Joseph, equal.
Leslie.
Bullock.
Lefkowitz and Rough, equal.
Mathewson and Wolepor, equal.
McCulloch and Levy, equal.
Stanway and McDonald (A. C.), equal.
James and McPartlin, equal.

Course 2: Geometry. Advanced.

Class I. Tuffy.

Class II. Weibel.
Foley.
Bieler.

Class III. Higinbotham.
Falconer

Course 2: Algebra, Theory of Equations.

Class I. Tuffy.
Weibel.

Class II. Foley.
Higinbotham.

Class III. Bieler.
Falconer.

Course 3: Algebra.

Class I. Vineberg.

Class II. Reid.

Class III. Larkin.

Course 3: Geometry.

Class I. Reid.
Larkin.

Class II. McEwen.
Vineberg.

Class III. Simon.
Rabinovitch (B.).
Deery.

Course 4: Calculus.

Class I. Hill.

Class II. Barnes.
Rorke.
McPherson.
Goddard.
Thornton.

Class III. Hemming.

Course 4: Conics.

Class I. Hill.

Class II. Rorke and Barnes, equal.
Goddard.
McPherson.
Hemming and Thornton, equal.

Class III. None.

Course 5.

Class I. Barnes.

Class II. McPherson.
Thornton.
McEwen.

Class III. None.

Course 6.

Class I. McPherson.

Class II. None.

Class III. Thornton.

Course 7.

Class I. None.

Class II. None.

Class III. Wright.

Course 12.

Class I. Wright.

Class II. None.

Class III. None.

DEPARTMENT OF MODERN LANGUAGES.

French: Course 1.

Class I. Kerr.
Patton.

Class II. Shea.
McGoun.
Gualtieri.
Macklaier.
Burke and Elliot and Laffoley and Molson, equal.
Aylen and Reid, equal.
Harris.

Class III. Schafer.
Addy and McDonald (A. C.) and Medbury, equal.
Shapira.
Anderson.
Blackman and Holloway, equal.
Johnson (A. S.) and Henderson, equal.
Jones and Riley, equal.
Bouillon and Johnson (A. W.) and Mathewson and Stanway, equal.
MacDonald (M. E.).
Avison and Higinbotham and Rutherford and Goldman, equal.
Werry and Mansfield, equal.
Ross and Larkin, equal
Cahana and McDougall (J.M.) and McDougall (G. S.) and Pierce and Webster (G. M.), equal.
Gittleson and Moore and Rohrlich and Shaw and Foley and Willis, equal.
Fitzmaurice and Kellnor, equal.
Brooke and Joseph and Macrae (D.), equal.
Dougall and Howell and Teggart, equal.
Abbottsmith and Peterson and Alexander (K.N.) and Gillies, equal.
Barrett and Lefkowitz and Smith (A. V.), equal.

French: Course 1. Advanced.

Class I. Shatford.
Sharples and Bullock, equal.

Class II. Gaboury.
Weibel and Copland, equal.
Fry and Klineberg, equal.
Banfill and McPartlin, equal.

Class III. Rough.

French: Course 2.

Class I. Zuckerman.
Wolepor.

Class II. Levy.
Steine and Wilson (C. R.), equal.
Scheffer.

Class III. Bieler.
Millen.
Gradinger.
Smith (F. M.).
Kanigsberg.
Hibbard.
Webster (J. C.).
Alexander (B.).

French: Course 3.

Class I. None.

Class II. Schleifstein.
Aylen.
Cockfield and Harvey, equal.

Spier.
Silverman.
Godwin and Teite'baum, equal.
Rowatt.

Class III. Savage.
Campbell.
McPherson and Hooper, equal.
Thornton.
Mills and Sperber, equal.
Derry and Breitman, equal.
Ford and Garrow, equal.
Husk.
Fitzsimons.
Gillespie.
Ross.
Foster and MacIntosh (H.) and Borden, equal.
Higginson and Lewis and Echenberg and Reford, equal.

French: Course 3. Advanced.

Class I. Raphael.

Class II. Contant and Hèbert, equal.

Class III. Franklin.
Sharples.

French: Course 4.

Class I. None.

Class II. Badian.
MacDonald (F. M.).
Shapira.

Class III. Levitt.
Glickman.

French: Course 5.

Class I. Monk.
Mergler.
Abbott.

Class II. Banfill and Novick, equal.
Macdonald.
Mitchell.

Class III. Young.
Moody.
Wall.
Salomon.
MacKinnon and Scott, equal.
Towers.

French: Course 8.

Class I. Mergler.
Monk.
Abbott.

Class II. Novick.
Wall.

Class III. Moody.

French: Course 9.

Class I. Monk.
Mergler.
Abbott.

Class II. None.

Class III. Moody and Novick, equal.
Wall.

German: Course 1a.

Class I. Patten.
Klineberg.
Schleifstein.
Teggart.
McDonald (A. C.).

Class II. Elliot.
Higinbotham.

Class III. Hooper.
Brown.
Cahana.

German: Course 1b.

Class I. Zuckerman.

Class II. Phillips.
Wolepor.
Levy and Gradinger, equal.
Alexander (B.).
Wilson (C. R.).

Class III. Scheffer.
Kennedy.
Steine and Webster (J. C.), equal.
Hibbard.
Richardson and McCulloch, equal.
Smith (F. M.).

German: Course 2.

Class I. None.

Class II. Brooke.

Class III. Zealand.

German: Course 3.

Class I. None.

Class II. Kanigsberg.

Class III. Hemming.

German: Course 4.

Class I. None.

Class II. Silverman.
Raphael.

Class III. None.

German: Course 5.

Class I.	Monk. Mergler.
Class II.	Salomon.
Class III.	Meyer.

German: Course 8.

Class I.	Mergler. Monk.
Class II.	Meyer.
Class III.	None

German: Course 9.

Class I.	Monk.
Class II.	Mergler.
Class III.	Meyer.

German: Course 10.

Class I.	Monk. Mergler.
Class II.	Meyer.
Class III.	None.

DEPARTMENT OF ORIENTAL LANGUAGES.

Course 1.

Class I.	Curtis.
Class II.	Peterson.
Class III.	None.

Course 6.

Class I.	None.
Class II.	Taylor.
Class III.	None.

DEPARTMENT OF PHILOSOPHY.

Course 1.

Class I.	Schleifstein. McIntosh. Sperber.
Class II.	Borden. Breitman and Franklin and Reford, equal.
Class III.	Savage. McMillan (M.). Boyce. Foster and McMillan (H.), equal. Curtis. Echenberg. Servage.

Course 3.

Class I.	Imrie and Sperber and Schleifstein, equal. Borden. Barnes (E. L.). McIntosh. McMillan (M.) and Rowat, equal. Craig. Breitman and Ewing, equal. Pitt. Barnes (D. S.) and Echenberg, equal
Class II.	McMillan (H.). Curtis. Boyce. Mullin. Townshend.
Class III.	Gillingham. Franklin. Janes. Reford. Harvey. Hebert. Savage.

Course 4.

Class I.	Mawdsley and Morrison, equal.
Class II.	Nichol (H. R. H.). DiFlorio. Cruikshank. Adair. Savage. Townshend.
Class III.	Younger. Lalanne and Nicoll (H.), equal. Harold.

Course 5.

Class I.	Klineberg.
Class II.	None.
Class III.	None.

Course 6.

Class I.	Klineberg. Wiseman.
Class II.	Grier. Baker.
Class III.	Boyd. McRae.

Course 9.

Class I. Klineberg.
Wiseman.
Mawdsley.

Class II. None.

Class III. None.

Course 14.

Class I. Klineberg.
Wiseman.
Levy.

Class II. None.

Class III. Baker.

Course 17.

Class I. Klineberg.

DEPARTMENT OF PHYSICS.

Course 1.

Class I. Weibel.
Pierce.
Fry.
Anderson.
Macklaier.
Murray (S. G.) and Reid, equal.
McGoun.

Class II. Tuffy and Willis, equal.
Tait.
Rosenstein.
Leslie.
Holloway and Macrae (D.), equal.
Werry.
Foley and Roper, equal.
Howell.
Goldman and Millen and Webster (G. M.), equal.
Cousens and Harris and Johnson (A. S.) and Sharples, equal.
James.
Stanway and Borden, equal.

Class III. Addy and Abbottsmith and Avison and Lidstone and Ross, equal.
Mansfield.
Banfill and Hibbard and Mathewson, equal.
Bouillon and McDougall (J. M.) and Schafer and Rough, equal.
Bullock and Fraser (C. H.) and Joseph and Levy and McPartlin and Smith (A. V.), equal.
Fitzmaurice and Moore and Peterson and Smith (V. B.), equal.
Wilson (C. R.) and Gaboury, equal.
Falconer and Lattoni and Medbury and Miller and Rogers and Zealand, equal.
Alexander (K.) and Klineberg and MacKeen and Riley, equal.

Henderson and McDougall (G. S.) and Rohrlich and Whitmore, equal.
Palmer.
Copland.
Ellison and Gillies and Wilson (H. C.), equal.
Jones.
Jerrom.
Laurin.
Brooke and Gualtieri and Murray (J. W.), equal.

Course 1 (*B.Sc.*).

Class I. None.

Class II. Steine.
Bieler.
Scheffer.

Class III. Zuckerman.
Alexander (B.) and McCulloch, equal.
Gradinger.
Smith (F. M.).
Wolepor and Kennedy, equal.
Heatherington and Kanigsberg, equal.

Course 2.

Class I. Mirsky.
McPherson.
Roston.
Foran and Rorke, equal.
Phillips.

Class II. Reid (H. E.).
Freedman and Thornton, equal.
Kay.
Rabinovitch.
Davidson (H.).

Class III. Hill.
Ford.
Foster.

Course 3.

Class I. Hill.
Hemming.

Class II. Henry and Mirsky and Dougall, equal.
Goddard.
Freedman.
Booker.
Charlton.
McGlaughlin.
Rabinovitch.

Class III. Shaw.
Lalanne.
Galley.
Kay.

DEPARTMENT OF ZOOLOGY.

Course 2.

Class I.
Godwin.
McGregor.
Spier.
Higginson.

Class II.
Banfill.
Mills.
Gillespie and Cruikshank, equal.
Barnes (D. S.).
Grier.
Burke and Ross, equal.

Class III.
Pratt.
Rabinovitch (B.).
Younger.

Course 5.

Class I.
Freedman (N.B.).
Silver.

Class II.
Petersen.
Rubin.
Maclennan.

Class III. None.

DEPARTMENT OF COMMERCIAL STUDIES.

FIRST YEAR.

ACCOUNTANCY.

Class I.
Rutherford (J. M.).
Laffoley.
Dougall.

Class II. Shapira.

Class III.
Blackman and Johnson, equal.
Friedman.
Stanger.
Grivakis.
MacDonald (M. E.).
Caron.

DRAWING.

Class I.
Laffoley.
Rutherford.
Dougall.
Shapira.

Class II.
Caron.
Johnson and Stanger, equal.
Gittleson.
Kellnor.

Class III.
Lefkowitz.
Shaw and Blackman, equal.
Friedman and MacDonald (M. E.), equal.

ECONOMIC GEOGRAPHY.

Class I. Johnson.
Lefkowitz.

Class II. Caron.
Rutherford.
Laffoley.
Gittleson.
MacDonald (M. E.) and Stanger, equal.

Class III. Blackman.
Friedman.
Shapira.
Kellnor.
Dougall.

ECONOMICS.

Class I. Rutherford.

Class II. Blackman.

Class III. Shapira (W.).
Shapira (J.).
Laffoley.
Johnson (A. W.).
Caron and Gittleson and Kellnor and Lefkowitz and Shaw, equal.

ENGLISH.

Class I. Rutherford.
Laffoley.

Class II. Blackman.
Shaw.
Johnson.
Lefkowitz.

Class III. Dougall.
Shapira.
Stanger.
Friedman and MacDonald, equal.
Kellnor.

HISTORY.

Class I. Johnson.
Gittleson.
Caron.
Kellnor.

Class II. Shapira (J.)
Laffoley and Dougall, equal.

Class III Lefkowitz.
McDonald (M. E.) and Stanger, equal.
Blackman and Friedman, equal
Shaw.

PHYSICS.

Class I. Blackman.
Shapira.

Class II. Rutherford.
Laffoley.
Lefkowitz.
Caron and Johnson, equal.
Dougall.

Class III. Kellnor.
Gittleson.
Shaw.

SECOND YEAR.

ACCOUNTANCY.

Class I. Badian.
Levitt.

Class II. Shapira (W.).

Class III. Glickman.
MacDonald.

HIGHER ACCOUNTANCY.

Class I. None.

Class II. K. Coote

Class III. None.

BUSINESS ORGANIZATION.

Class I. Shapira (W.).
Badian.

Class II. Levitt.
Glickman.

Class III. MacDonald.

COMMERCIAL LAW.

Class I. None.

Class II. MacDonald.
Shapira.
Levitt.
Badian.

Class III. None.

ECONOMIC GEOGRAPHY.

Class I. Badian.
Shapira.
MacDonald.

Class II. Levitt.
Glickman.

Class III. None.

ENGLISH.

Class I. Badian.
Shapira.

Class II. Levitt.
MacDonald.

Class III. Glickman.

HISTORY OF COMMERCE.

Class I. Shapira.

Class II. Levitt.
Badian.

Class III. Glickman.
MacDonald.

MATHEMATICS.

Class I. Badian.
Shapira.

Class II. Levitt.

Class III. MacDonald.
Wetstein.
Glickman.

McGill University.

SESSIONAL EXAMINATIONS, 1918-19.

REPORT OF THE

Faculty of Applied Science.

Honours in the Graduating Class of the Faculty of Applied Science, and Presentation of Medals, Certificates and Prizes, as follows:—

(Names in alphabetical order.)

Brennen, Herbert Joseph—British Association Medal; Honours in Inorganic Chemistry, Physical Chemistry and Electrical Engineering.

McIntosh, Ernest Donald—Honours in Strength of Materials, Hydraulics and Hydraulic Machines.

Palmer, Robert Newton—George E. Drummond Prize, and also Undergraduates' Society's Prize, for Summer Essay.

Thompson, Grattan Dalrymple—The Louis Robertson Prize in Design.

Tousaw, Albert Anderson—The Sir Wm. Dawson Fellowship in Mining; British Association Medal.

Wallace, George Arthur—British Association Medal; Honours in Electrical Engineering and Laboratory, Applications of Electricity, Electric Light and Power Distribution and Electric Traction, and Thermodynamics.

PASSED FOR THE DEGREE OF BACHELOR OF ARCHITECTURE.

Thompson, Grattan Dalrymple, Montreal, P.Q.

(*Unranked.*)

Fenster, Moses, Montreal, P.Q.

PASSED FOR THE DEGREE OF BACHELOR OF SCIENCE.

IN CHEMISTRY.

(In order of merit.)

Levitt, Ephraim, Montreal, P.Q.
Mouquin, Henri, New York, U.S.A.

IN CHEMICAL ENGINEERING.

(In order of merit.)

Brennen, Herbert Joseph, Westmount, P.Q.
Amdur, Leon, Montreal, P.Q.
Brennen, James Hugh, Westmount, P. Q.
Laing, Ross Richard, Westmount, P. Q.

(*Unranked.*)

Harshaw, William Jacob, Cleveland, U.S.A.

IN CIVIL ENGINEERING.

(In order of merit.)

Pitt, Sylvester Sheridon, Montreal, P.Q.
Buchanan, Colin Archibald, Levis, P.Q.
McLellan, Harold Elmer, Summerside, P.E.I.

(*Unranked.*)

(In alphabetical order.)

Irwin, Gifford Melville, Vancouver, B.C.
Levin, Jacob, Ottawa, Ont.
McCutcheon, Manford Wendell, Montreal, P.Q.
McIntosh, Ernest Donald, Carleton Place, Ont.
Sullivan, Jeremiah Joseph, Valleyfield, P.Q.

IN ELECTRICAL ENGINEERING.

Wallace, George Arthur, Granby, P.Q.

(*Unranked.*)

(In alphabetical order.)

Doran, James, Montreal, P.Q.
Dunbar, Donald Gray, Hopewell, N.S.

IN MECHANICAL ENGINEERING.

(In order of merit.)

Fraser, Isaac Matheson, Pictou, N.S.
Standish, Samuel James, Waterloo, P.Q.

(Unranked.)

Walker, Melvyn Lothian, Pointe Gatineau, P.Q.

IN MINING ENGINEERING.

(In order of merit.)

Tousaw, Albert Anderson, Westmount, P.Q.
Anderson, Clayton Earle, Ottawa, Ont.

(*Unranked.*)

Cater, Henry Arthur, Montreal, P.Q.
Wall, William Clarence, Montreal, P.Q. (*aegrotat.*)

THIRD YEAR.

PRIZES.

(In alphabetical order.)

Deneau, Gaston—One half of Second J. M. McCarthy Fieldwork Prize.
Dunbar, John Robert—British Association Exhibition for Strength of Materials and Mechanics.
Mahaffy, Herbert Laurence—First J. M. McCarthy Fieldwork Prize.
Powell, John Murray—One half of Second J. M. McCarthy Fieldwork Prize.
Schippel, Walter Herbert—British Association Prize for Strength of Materials and Mechanics.

PASS LIST OF THE SESSIONAL EXAMINATIONS.

IN ARCHITECTURE.

(In order of merit.)

Lyman, Walter Kenneth Gordon, Montreal, P.Q.
*Durnford, Alexander Tilloch Galt, Montreal, P.Q.

IN CHEMICAL ENGINEERING.

(In order of merit.)

Larose, Paul, Montreal, P.Q.
Mosher, Wilfred Douglas, Lunenburg, N.S.
Labell, Maurice Nelson, Mansonville, P.Q.
*Lafontaine, Gerard H., Montreal, P.Q.

(*Unranked.*)

(In alphabetical order.)

Parsons, Frederick Sidney, East Angus, P.Q.
Proudfoot, David Gibb, Montreal, P.Q.

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*Conditional upon passing supplemental examinations.

IN CIVIL ENGINEERING.

(In order of merit.)

*Powell, John Murray, Ottawa, Ont.
*Mahaffy, Herbert Laurence, Montreal, P.Q.

(*Unranked.*)

(In alphabetical order.)

Greene, Leslie Kirk, Montreal, P.Q.
LaMontagne, Henri Gaston, Montreal, P.Q.

IN ELECTRICAL ENGINEERING.

(In order of merit.)

Dunbar, John Robert, Ottawa, Ont.
Schippel, Walter Herbert, Montreal, P.Q.

(*Unranked.*)

(In alphabetical order.)

*Roberton, Kenneth Baillie, Montreal, P.Q.

IN MECHANICAL ENGINEERING.

(*Unranked.*)

(In alphabetical order.)

*Mackenzie, Brouard Hunter Tyndall, Moncton, N.B.
Patten, Roy Hamilton, St. George, Ont.
Smith, Edmund Howard, Westmount, P.Q.

PASS LIST OF THE SESSIONAL EXAMINATIONS OF STUDENTS WHO WERE UNABLE TO TAKE THE SEPTEMBER SUMMER SCHOOLS ON ACCOUNT OF MILITARY SERVICE.

(This Summer School work must be taken at the first opportunity.)

(In alphabetical order.)

*Edwards, Gordon Maxwell Meighen, Ottawa, Ont. (Mining Engineering.)
*Elder, John Campbell, Montreal West, P.Q. (Civil Engineering.)
Vessot, Charles Ulysses Robert, Ottawa, Ont. (Mechanical Engineering.)
*Windsor, J. Rorke, Westmount, P.Q. (Electrical Engineering.)

SECOND YEAR.

PRIZES.

(In alphabetical order.)

Brow, James Barrett—First Prize for Mathematics and Mechanics.
Canning, Dow Vernon—Second Prize for Mathematics and Mechanics.
Fortin, Gaston Lalonde—Third Prize for Mathematics and Mechanics.

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*Conditional upon passing supplemental examinations.

PASS LIST OF THE SESSIONAL EXAMINATIONS.

IN ARCHITECTURE.

*VanEtten, Frederick Bouton, Kingston, N.Y., U.S.A.

IN CHEMISTRY.

*Henderson, Conway Hemsley Drummond, Westmount, P.Q.

OTHER COURSES.

(In order of merit.)

Cuddy, John Michael, Montreal, P.Q.
Gardner, John George, Montreal, P.Q.
Canning, Dow Vernon, Westmount, P.Q.
Gliddon, W. G. Claude, Ottawa, Ont.
Brow, James Barrett, Charlottetown, P.E.I.
Phelan, Thomas Enslow, Westmount, P.Q.
Jackson, Carl Henry, Montreal, P.Q.
Fortin, Gaston Lalonde, Montreal, P.Q.
Jordan, Herbert Scott, Westmount, P.Q.
Bain, George W., Lachute, P.Q.
Brault, Paul G. A., Outremont, P.Q.
O'Halloran, James, Ottawa, Ont.
*Maxwell, Edward Blythe, Montreal, P.Q.
*Challenger, James Othneil, St. Kitts, B.W.I.
Winslow, Kinelm M., Winnipeg, Man.
Acton, Harold Joseph, Westmount, P.Q.
*O'Sullivan, Louis, Montreal, P.Q.
*Livingstone, Kenneth Mackay, Washington, D.C.
*Gauthier, Paul Gillies, Beaconsfield, P.Q.

(*Unranked.*)

(In alphabetical order.)

Brandes, Emmanuel, Montreal, P.Q.
Elder, John Campbell, Montreal West, P.Q.
Forbes, Karl, Montreal, P.Q.
*Kay, Stuart Evans, Montreal, P.Q.
Kirk, Edward William H., Montreal, P.Q.
Lafontaine, Gerard H., Montreal, P.Q.
Roberton, Kenneth Baillie, Montreal, P.Q.
Thomson, Walter Wilfred, Montreal, P.Q.
*Tison, Maurice, Montreal, P.Q.
Wiggs, Gordon Lorne, Quebec, P.Q.
Windsor, J. Rorke, Westmount, P.Q.

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*Conditional upon passing supplemental examinations.

FIRST YEAR.

PRIZES.

(In alphabetical order.)

Bonneville, Sydney—Second Prize for Mathematics, Descriptive Geometry and Physics.
Carlyle, Arthur William—Scott Exhibition for Mathematics, Descriptive Geometry and Physics.
Gaboury, Maurice Albert—First Fleet Shopwork Prize.
Mitchell, James Murray—Second Fleet Shopwork Prize.
Weldon, T. Herbert—First Prize for Mathematics, Descriptive Geometry and Physics.

PASS LIST OF THE SESSIONAL EXAMINATIONS.

IN ARCHITECTURE.

(In order of merit.)

Perry, Alfred Leslie, Montreal, P.Q.
*Watt, Leslie Alexander, St. Anne de Bellevue, P.Q.

(*Unranked.*)

Brown, Lawrence Elliott, Ottawa, Ont.
Durnford, Alexander Tilloch Galt, Montreal, P.Q.
VanEtten, Frederick Bouton, Kingston, U.S.A.

OTHER COURSES.

(In order of merit.)

Carlyle, Arthur William, Ottawa, Ont.
Weldon, T. Herbert, Montreal, P.Q.
Wilder, Hartland Bates, Westmount, P.Q.
Messenger, William Aubrey, Montreal, P.Q.
Mitchell, James Murray, Montreal, P.Q.
Carson, Cecil Edward, Westmount, P.Q.
Eager, Norman Herbert Aldwyn, Montreal, P.Q.
Chorney, Melvin Mendel, Montreal, P.Q.
Tatley, David Lambert, Westmount, P.Q.
Gurman, Israel I. T., Montreal, P.Q.
Banfill, Harold Leroy, Richmond, P.Q.
*Bonneville, Sydney, Woodroffe, Ont.
Grant, Ralph Glencoe, Montreal, P.Q.
Macrae, Donald, Westmount, P.Q.

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*Conditional upon passing supplemental examinations.

Buchanan, John Edmond, Montreal, P.Q. } equal.
Gnaedinger, Paul Ernest, Montreal, P.Q. }
Boronow, Paul, Westmount, P.Q.
Bastable, Ross Waller, Lachine, P.Q.
*Brown, Edmund Vere, Winnipeg, Man.
Clark, George Silas, Lachute, P.Q.
*Cousineau, Charles A., Montreal, P.Q.
Loebel, John Mayer, Montreal, P.Q.
Wonham, Walter Richard, Westmount, P.Q.
*Notman, James Geoffrey, Westmount, P.Q.
*Bradfield, John Ross, Morrisburg, Ont.
Taylor, John Frederick Rowan, Montreal, P.Q.
*Todd, Arthur Alison, Victoria, B.C.
Taylor, Edward Plunket, Ottawa, Ont.
Williams, Frederick Wayland, St. Lambert, P.Q.
*Anderson, Dan, Charlottetown, P.E.I.
*Johnson, Edwin Lewis, Brownsburg, P.Q.
*Brown, George Basil, Montreal, P.Q.
*Mackenzie, George Home, Kansas City, U.S.A.
*Evans, William, Montreal, P.Q.
*MacNider, Clarence Henry, Westmount, P.Q.
*Wright, Stanley Weir, Westmount, P.Q.
*Hague, Harry McLeod, Montreal, P.Q.
*Nesbitt, Martin Bicirra, Urique, Mexico.
*Kirsh, Harry, Notre Dame de Grace, P.Q.

(*Unranked.*)

(In alphabetical order.)

*Armstrong, Lawrence Henry, Montreal, P.Q.
Bourret, Paul E., Montreal, P.Q.
*Brooks, John Kenneth, Montreal, P.Q.
Elliot, Gerald Burton, Westmount, P.Q.
Gauthier, Paul Gillies, Beaconsfield, P.Q.
Gerez, Jose Manuel, Ottawa, Ont.
Glen, Alexander Fulton, St. Agathe des Monts., P.Q.
Hill, Stanley Clayton, Richmond, P.Q.
Kennedy, Charles Laurence, Parkdale, Man.
Livingstone, Kenneth Mackay, Washington, D.C., U.S.A.
*Morrison, Dave Reid, Westmount, P.Q.
Murphy, Alexander Gordon Silcox, Westmount, P.Q.
O'Sullivan, Louis, Montreal, P.Q.
Patterson, Kenneth Breck, Westmount, P.Q.
*Root, Stephen Eastman, Westmount, P.Q.
Salamis, Basil, Montreal, P.Q.

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*Conditional upon passing supplemental examinations.

Shotwell, John Stuart Glashan, Ottawa, Ont.
Thompson, Cecil E., Ottawa, Ont.
Turton, Victor Herbert, Westmount, P.Q.
*Wain, Eric James, St. Lambert, P.Q.
Wait, Eric H., Montreal, P.Q.
Yates, Christopher Montague, Montreal, P.Q.

STANDING IN THE SEVERAL SUBJECTS.

(1) STUDENTS IN ARCHITECTURE.

ARCHITECTURAL DESIGN.

Fifth Year.—*Class I.*—None. *Class II.*—None. *Class III.*—Thompson.
Fourth Year.—*Class I.*—None. *Class II.*—None. *Class III.*—Thompson, Fenster. *Unranked.*—Little, McEvers.
Third Year.—*Class I.*—None. *Class II.*—Durnford. *Class III.*—Lyman.
Second Year.—*Class I.*—None. *Class II.*—None. *Class III.*—VanEtten.

ARCHITECTURAL DRAWING.

Fourth Year.—*Class I.*—None. *Class II.*—None. *Class III.*—Thompson. *Unranked.*—Little, McEvers.
Third Year.—*Class I.*—Durnford, Lyman. *Class II.*—None. *Class III.*—None.
Second Year.—*Class I.* None. *Class II.*—None. *Class III.*—VanEtten.
First Year.—*Class I.*—Perry. *Class II.*—None. *Class III.*—Luke and Watt, equal.

ARCHITECTURAL ESSAYS.

Fifth Year.—*Class I.*—Thompson. *Class II.*—None. *Class III.*—None.
Fourth Year.—*Class I.*—McEvers, Little. *Class II.*—None. *Class III.*—None.
Third Year.—*Class I.*—None. *Class II.*—Lyman, Durnford. *Class III.*—None.
Second Year.—*Class I.*—None. *Class II.*—VanEtten. *Class III.*—None.

ARCHITECTURAL GEOMETRY.

First Year.—*Class I.*—Perry. *Class II.*—Luke. *Class III.*—Watt.

BUILDING CONSTRUCTION.

Second Year.—*Class I.*—None. *Class II.*—Brown. *Class III.*—None.

BUILDING DETAILS.

Second Year.—*Class I.*—Brown. *Class II.*—None. *Class III.*—None.

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*Conditional upon passing supplemental examinations.

ELEMENTS OF ARCHITECTURE.

First Year.—*Class I.*—Perry. *Class II.*—Watt, Luke. *Class III.*—Morris.

ELEMENTS OF COMPOSITION.

Second Year.—*Class I.*—VanEtten. *Class II.*—None. *Class III.*—None.

FREEHAND DRAWING.

Fourth Year.—*Class I.*—McEvers. *Class II.*—Little. *Class III.*—None.
Third Year.—*Class I.*—None. *Class II.*—Durnford. *Class III.*—Lyman.
Second Year.—*Class I.*—None. *Class II.*—VanEtten. *Class III.*—Brown.
First Year.—*Class I.*—Perry. *Class II.*—Luke. *Class III.*—Morris, Watt.

HISTORY OF ARCHITECTURE (CLASSIC).

Second Year.—*Class I.*—None. *Class II.*—None. *Class III.*—VanEtten.

HISTORY OF ARCHITECTURE (MEDIAEVAL).

Fourth and Third Years.—*Class I.*—McEvers. *Class II.*—Little. *Class III.*—Lyman.

HISTORY (GENERAL).

First Year.—*Class I.*—None. *Class II.*—Morris, Luke, Watt. *Class III.*—Perry.

HISTORICAL DRAWING.

Fifth Year.—*Class I.*—None. *Class II.*—Thompson. *Class III.*—None.

MODELLING.

Fourth Year.—*Class I.*—None. *Class II.*—Thompson. *Class III.*—None.

ORNAMENT AND DECORATION NO. 11.

Third Year.—*Class I.*—None. *Class II.*—Lyman. *Class III.*—Durnford.

ORNAMENT AND DECORATION NO. 12.

Third Year.—*Class I.*—None. *Class II.*—Lyman, Durnford. *Class III.*—None.

PERSPECTIVE.

Third Year.—*Class I.*—None. *Class II.*—Durnford. *Class III.*—Lyman.

PHYSICS.

First Year.—*Class I.*—None. *Class II.*—Perry. *Class III.*—Watt; Luke and Morris, equal.

PHYSICS LABORATORY.

First Year.—*Class I.*—Perry, Morris. *Class II.*—Watt. *Class III.*—Luke.

PROFESSIONAL PRACTICE.

Fifth Year.—Class I.—Thompson, McEvers. *Class II.*—Little. *Class III.*—None.

STRUCTURAL ENGINEERING II.

Fourth and Third Years.—Class I.—McEvers; Little and Thompson, equal. *Class II.*—None. *Class. III.*—Lyman.

STRUCTURAL ENGINEERING (DRAFTING).

Fourth and Third Years.—Class I.—None. *Class II.*—Thompson, Lyman, Durnford. *Class III.*—None. *Unranked.*—Little, McEvers.

STRUCTURAL ENGINEERING (DRAFTING).

Second Year.—Class I.—None. *Class II.*—VanEtten. *Class III.*—None.

SUMMER READING AND WORK.

Fourth Year.—Class I.—None. *Class II.*—None. *Class III.*—Thompson.
Third Year.—Class I.—None. *Class II.*—None. *Class III.*—Lyman, Durnford.
Second Year.—Class I.—VanEtten. *Class II.*—None. *Class III.*—None.

THEORY OF PLANNING.

Fifth and Fourth Years.—Class I.—None. *Class II.*—None. *Class III.*—Thompson, Fenster.

(2) STUDENTS IN OTHER COURSES.

APPLICATIONS OF ELECTRICITY.

Fourth Year.—Class I.—Wallace. *Class II.*—None. *Class III.*—Ord.

APPLIED ELECTRO-CHEMISTRY AND LABORATORY.

Fourth Year.—Class I.—Brennan, H. J. *Class II.*—Brennen, J. H., Amdur, Ord. *Class III.*—Mouquin and Levitt, equal; Laing, Proudfoot.

BRIDGE DESIGN.

Fourth Year.—Class I.—None. *Class II.*—Pitt, Buchanan, McIntosh, McLellan. *Class III.*—Levin; Green and Irwin, equal.

CHEMISTRY.

ADVANCED INORGANIC CHEMISTRY.

Fourth Year.—Class I.—Brennen, H. J., Millar. *Class II.*—Mouquin. *Class III.*—Levitt.

ADVANCED ORGANIC CHEMISTRY.

Fourth Year.—*Class I.*—Brennen, H. J. *Class II.*—Levitt, Amdur. *Class III.*—Brennen, J. H., Laing.

FOOD CHEMISTRY.

Fourth Year.—*Class I*—None. *Class II.*—Brennen, H. J. *Class III.*—Brennen, J. H., and Mouquin, equal; Amdur, Laing, Proudfoot.

GENERAL CHEMISTRY.

Second Year.—*Class I.*—Jordan, Gliddon, Gardner, Phelan, Cuddy, Winslow, Jackson. *Class II.*—Shotwell; Challenger and Gibbs, equal; Canning, Tansley, Yates, Hyndman, Patterson. *Class III.*—Fortin and Maxwell, equal; Bain, Livingstone; O'Halloran and Salamis, equal; Gauthier and O'Sullivan, equal; Acton and Brault, equal; Bethune and Gualtieri, equal.

Second Year.—(*Chemistry Course*). *Class I.*—Henderson. *Class II.*—None. *Class III.*—None.

HISTORY OF CHEMISTRY.

Fourth Year.—*Class I.*—Brennen, H. J. *Class II.*—Amdur and Brennen, J. H., equal. *Class III.*—Proudfoot, Levitt, Mouquin, Laing.

INORGANIC INDUSTRIAL CHEMISTRY.

Fourth Year.—*Class I.*—Brennen, H. J. *Class II.*—Mouquin, Levitt. *Class III.*—Brennen, J. H., Laing, Amdur, Proudfoot.

INORGANIC QUALITATIVE ANALYSIS.

Third Year.—*Class I.*—Erlenborn. *Class II.*—None. *Class III.*—Edwards, Bradley, Henry.

Second Year.—*Class I.*—None. *Class II.*—None. *Class III.*—Henderson.

INORGANIC QUANTITATIVE ANALYSIS.

Third Year.—*Class I.*—Millar, Larose. *Class II.*—Crowe, Mosher, Ross. *Class III.*—Parsons, Labell, Lafontaine.

ORGANIC CHEMISTRY.

Third Year.—*Class I.*—Millar. *Class II.*—Larose, Mosher, Ross; Crowe and Parsons, equal. *Class III.*—Labell.

ORGANIC INDUSTRIAL CHEMISTRY.

Fourth Year.—*Class I.*—None. *Class II.*—None. *Class III.*—Brennen, H. J., Mouquin, Laing.

PHYSICAL CHEMISTRY.

Third Year.—Class I.—Larose, Millar. *Class II.*—Crowe. *Class III.*—Mosher, Labell, Lafontaine, Ross.

PHYSICAL CHEMISTRY AND LABORATORY.

Fourth Year.—Class I.—Brennen, H. J. *Class II.*—Brennen, J. H. *Class III.*—Mouquin, Amdur, Levitt, Laing, Proudfoot.

CRYSTALLOGRAPHY.

Fourth Year.—Class I.—None. *Class II.*—Mouquin, Levitt. *Class III.*—None.

DESCRIPTIVE GEOMETRY.

First Year.—Class I.—Weldon; Armstrong and Bonneville and Carlyle and Clark, equal; Mitchell, Wilder, Glen; Fisk and Gnaedinger, P. E., equal; Brown, E. V., and Gnaedinger, A. L., and Grant, equal; Chorney and Kirsh, equal; Gurman and Simons, equal. *Class II.*—Banfill and Cousineau and Tatley, equal; Boronow and Carson, equal; Bastable and Notman and Quinlan, equal; Bradfield and Humes, equal; Anderson, Mackenzie; Evans and Macrae, equal; Drummond and Gaboury and Williams, F. W., equal; Messenger; Brown, G. B., and Morrison, equal; McCallum. *Class III.*—MacNider and Nesbitt, equal; Todd; Johnson and Loebel and Reid and Turton and Wonham, equal; Turnbull; Elliot and Gamble and Munro, equal; Eager and Taylor, J. F. R., equal; Taylor, E. P.; Fry and Hague and Sherrard, equal; Kerr and Thompson and Wright, equal; Jenks and Midgley, equal; Buchanan; Bimson and Friedman and McInnis and Ross, equal.

DESIGNING.

Fourth Year.—Class I.—Fraser. *Class II.*—None. *Class III.*—Patten, Standish. *Unranked.*—Walker.

ELECTRIC LIGHT AND POWER DISTRIBUTION.

Fourth Year.—Class I.—None. *Class II.*—None. *Class III.*—Ord.

ELECTRIC TRACTION.

Fourth Year.—Class I.—Wallace. *Class II.*— None. *Class III.*—Ord, Roberton.

ELECTRICAL DESIGNING.

Fourth Year.—Class I.—Wallace. *Class II.*—None. *Class III.*—None.

ELECTRICAL ENGINEERING.

Fourth Year.—Class I.—Wallace. *Class II.*—None. *Class III.*—None.
Third Year.—Class I.—Dunbar. *Class II.*—Roberton, Schippel. *Class III.*—Windsor, Wiggs.

ELECTRO-METALLURGY.

Fourth Year.—Class I.—Wallace. *Class II.*—Brennen, H. J.; Ord and Roberton, equal. *Class III.*—None.

ELEMENTS OF ELECTRICAL ENGINEERING.

Fourth and Third Years.—Class I.—Brennen, H. J., Thomson, Tousaw, Green. *Class II.*—Vessot, McIntosh, McLellan, Palmer, Amdur, Wall, Irwin. *Class III.*—Greene, Proudfoot, Pitt, Buchanan, Brennen, J. H., Levin.

ENGINEERING ECONOMICS.

Third Year.—Class I.—Millar; Thomson and Timmerman, equal; Mosher. *Class II.*—Labell, Larose; Lafontaine and Vessot, equal; Elder and Ross, equal; Hart and Henry, equal. *Class III.*—Crowe, Edwards; Cross and Shapter, equal; Erlenborn and Rutherford, equal; Powell, Deneau, Kirk, Bradley.

ENGINEERING LAW.

Fourth Year.—Class I.—McIntosh, Green, Pitt, Wallace. *Class II.*—Tousaw; Ord and Palmer, equal; McLellan. *Class III.*—Levitt, Brennen, H. J.; Anderson and Mouquin and Standish, equal; Amdur and Patten, equal; McEvers, Lawrence, Little, Wall; Buchanan and Laing, equal.

ENGLISH.

First Year.—Class I.—Todd, Kirsh. *Class II.*—Jenks, Banfill, Mitchell, Gurman, Boronow, Messenger; Bonneville and Carson and Drummond and Grant and Kerr and Perry, equal. *Class III.*—Buchanan and Eager and Wilder, equal; Bastable and Chorney and Falconer and Harling, equal; Bradfield and Brown, E. V., and Carlyle and Gnaedinger, P. E., and Weldon and Wonham, equal; Brown, L. E., and Clark and Murphy and Watt and Williams, F. W., equal; Senay; Midgley and Munro and Tatley, equal; Loebel and Munn, equal; Brownstone and Lyall and Macrae and Ross and Taylor, E. P., equal; Bimson and Cousineau and Newman, equal; Gamble and Humes and Mackenzie and Morrison and Reid and Taylor, J. F. R., and Wright, equal; Evans and Johnson and MacNider and Simons, equal.

EXPERIMENTAL ENGINEERING.

Fourth Year.—Class I.—None. *Class II.*—Patten, Standish, Fraser. *Class III.*—Walker.

FIRE ASSAYING.

Third Year.—Class I.—None. *Class II.*—Edwards and Erlenborn, equal. *Class III.*—Jue.

FOUNDATIONS AND MASONRY.

Third Year.—Class I.—Elder and Mahaffy, equal. *Class II.*—Muir, Powell. *Class III.*—Deneau, Hart.

FREEHAND DRAWING AND LETTERING.

First Year.—Class I.—Armstrong, Messenger; Gnaedinger, A. L., and Gnaedinger, P. E., equal; Gaboury, Mitchell, Chorney, Buchanan, Munro, Grant, Gurman, Simons; Kirsh and Weldon, equal. *Class II.*—Evans; Boronow and Macrae and Notman, equal; Fisk and Fry, equal; Tatley; Banfill and Wonham, equal; Carlyle and Nesbitt, equal; Pastable and Wilder, equal; Anderson; Bonneville and Loebel and MacNider, equal; Eager and Lyall, equal; Bimson and Brownstone and Munn, equal; Carson, Bradfield, Clark, equal. *Class III.*—Mackenzie; Brown, E. V., and Midgley and St. Germain, equal; McInnis and Turton, equal; Humes and Ross and Taylor, E. P., equal; Murphy and Williams, F. W., equal; Williams, A. L.; Falconer and Taylor, J. R., equal; Tittensor; Cousineau and Macoun, equal. *Unranked.*—Quinlan.

GEODESY.

Fourth Year.—Class I.—None. *Class II.*—McIntosh, Buchanan, Pitt. *Class III.*—McLellan.

GEODETIC FIELDWORK.

Fourth Year.—Class I.—None. *Class II.*—Buchanan and Pitt, equal. *Class III.*—McLellan, Levin.

GEOLOGY (GENERAL).

Third Year.—Class I.—Millar, Macklin. *Class II.*—Erlenborn, Edwards, Jue; Elder and Henry, equal. *Class III.*—Bradley, Powell, Deneau.

GEOLOGY OF CANADA.

Fourth Year.—Class I.—Tousaw. *Class II.*—Anderson. *Class III.*—Wall; Lawrence and Palmer, equal.

GRAPHICAL STATICS.

Second Year.—Class I.—Challenger, Hill, Murphy; Fortin and Maxwell and Winslow, equal; Bain and Brandes and Cuddy and Jackson, equal; Phelan; Canning and Gardner, equal. *Class II.*—Gauthier and Gliddon, equal; Brault, Brow, Kennedy; Acton and O'Sullivan, equal. *Class III.*—O'Halloran, Yates, Livingstone, Jordan, Gualtieri, Henderson; Kay and Tansley, equal.

HEATING AND VENTILATION

Fourth Year.—Class I.—Fraser. *Class II.*—None. *Class III.*—Standish, Patten.

HYDRAULICS.

Fourth and Third Years.—Class I.—McIntosh, Fraser; Buchanan and Pitt, equal; Standish. *Class II.*—McLellan. *Class III.*—Powell, Elder; Patten and Walker, equal; Lamontagne, Mahaffy; Hart and Levin, equal.

HYDRAULICS AND LABORATORY (SHORT COURSE).

Fourth Year.—Class I.—Tousaw; Amdur and Brennen, H. J., equal. *Class II.*—Anderson. *Class III.*—Wall, Brennen, J. H.; Gerez and Laing, equal.

HYDRAULIC MACHINES.

Fourth Year.—Class I.—McIntosh. *Class II.*—Buchanan, Pitt, Walker. *Class III.*—Green and McLellan, equal; Fraser; Patten and Standish, equal. *Unranked.*—Irwin.

LABORATORIES.

CHEMICAL LABORATORY.

Second Year.—Class I.—Jordan, Winslow, Bain, Gardner. *Class II.*—Cuddy, Canning, Jackson, Challenger, O'Halloran, Gliddon; Livingstone and Phelan, equal; Yates; Brault and Fortin, equal; Gauthier and Shotwell and Tansley, equal. *Class III.*—Maxwell; Salamis and Stroud, equal; Hill; Acton and O'Sullivan, equal; Patterson; Bethune and Kennedy, equal; Gualtieri.

Second Year (Chemistry Course).—Class I.—None. *Class II.*—Henderson. *Class III.*—None.

CHEMICAL LABORATORY (INORGANIC QUALITATIVE ANALYSIS).

Third Year.—Class I.—Edwards and Erlenborn, equal. *Class II.*—Bradley; Henry and Leo, equal; Jue. *Class III.*—None.

Second Year.—Class I.—Timmerman. *Class II.*—Cross, Henderson. *Class III.*—None.

CHEMICAL LABORATORY (INORGANIC QUANTITATIVE ANALYSIS).

Third Year (*Chemical Engineering Course*).—Crowe and Larose, equal. *Class II.*—Lafontaine and Mosher, equal; Labell. *Class III.*—Kirk and Parsons, equal.

Third Year (*Chemistry Course*).—*Class I.*—Millar. *Class II.*—None. *Class III.*—None.

CHEMICAL LABORATORY (ORGANIC).

Fourth Year.—*Class I.*—Brennen, H. J. *Class II.*—Amdur, Levitt, Brennen, J. H. *Class III.*—Proudfoot; Mouquin and Laing, equal.

Third Year.—*Class I.*—Millar, Larose. *Class II.*—Crowe, Lafontaine, Mosher, Kirk, Ross. *Class III.*—Labell, Cross, Cloutier.

ELECTRICAL ENGINEERING LABORATORY.

Fourth Year (*Electrical Engineering Course*).—*Class I.*—Wallace. *Class II.*—None. *Class III.*—Ord.

Fourth and Third Years.—*Class I.*—Gerez, Greene. *Class II.*—Pitt, Shapter, Levin; McIntosh and Palmer, equal; McLellan and Proudfoot, equal. *Class III.*—Lawrence and Tousaw, equal; Thomson and Vessot and Amdur and Anderson, equal; Buchanan and Green, equal; Brennen, J. H., Laing; Brennen, H. J. and Rutherford and Wall, equal. *Unranked.*—Irwin and Mackenzie.

Third Year (*Electrical Engineering Course*).—*Class I.*—Schippel. *Class II.* Dunbar, Wiggs. *Class III.*—Windsor. *Unranked.*—Parnell.

ELECTRO-METALLURGY LABORATORY.

Fourth Year.—*Class I.*—None. *Class II.*—Brennen, H. J. *Class III.*—None.

GEODETIC LABORATORY.

Fourth Year.—*Class I.*—None. *Class II.*—Buchanan; McIntosh and Pitt, equal; McLellan. *Class III.*—Levin.

HYDRAULICS LABORATORY.

Fourth and Third Years.—*Class I.*—Fraser; Patten and Walker, equal. *Class II.*—McIntosh, Pitt, Standish; Buchanan and Powell, equal. *Class III.*—Lamontagne; Elder and Mahaffy, equal; McLellan, Levin, Hart.

MECHANICAL ENGINEERING LABORATORY.

Fourth Year.—*Class I.*—None. *Class II.*—Fraser. *Class III.*—Patten; Standish and Walker, equal.

Third Year (*General Course*).—*Class I.*—Larose, Erlenborn, Crowe, Vessot. *Class II.*—Mosher, Labell. *Class III.*—Bradley, Deneau, Edwards, Lafontaine, Hart; Jue and Powell and Shapter, equal. *Unranked.*—Elder, Henry, Macklin, Thomson.

Third Year (*Electrical Engineering Course*).—*Class I.*—Dunbar, Schippel. *Class II.*—Windsor. *Class III.*—Wiggs. *Unranked.*—Parnell.

ORE DRESSING LABORATORY.

Fourth Year.—*Class I.*—None. *Class II.*—Tousaw, Anderson, Lawrence, Gerez. *Class III.*—Palmer and Wall, equal.

PHYSICAL LABORATORY.

Third Year (*Electrical Engineering Course*).—*Class I.*—Schippel; Dunbar and Wiggs, equal. *Class II.*—Parnell. *Class III.*—Windsor.

Second Year.—*Class I.*—Gardner; Cuddy and Jackson, equal. *Class II.*—Winslow, Canning, Maxwell, Brow; Fortin and Gliddon, equal; Hill, O'Halloran, Phelan, Brault, Brandes. *Class III.*—Bain, Jordan; Kennedy and Livingstone, equal; Gualtieri and Shotwell, equal; O'Sullivan and Salamis, equal; Acton and Gauthier, equal; Challenger, Stroud, Tansley; Mackenzie and Yates, equal; Benson and Hamilton, equal.

First Year.—*Class I.*—Carlyle, Notman. *Class II.*—Macrae and Todd, equal; Boronow; Bonneville and Bradfield and Gnaedinger, P. E., and Mitchell, equal; Eager and Fry, equal; Hague and Messenger and Tatley and Weldon, equal; Wilder; Brown, E. V., and Munro and Nesbitt, equal; Armstrong; Banfill and Buchanan and Carson and Chorney, equal; Bastable and Taylor, J. F. R., equal; Clark and Grant, equal; Cousineau and Gnaedinger, A. L., and Holcomb and Simons, equal. *Class III.*—Anderson and Brown, G. B., and Drummond and Gurman and Schleifstein and Williams, A. L., equal; Evans and Jenks and Reid and Taylor, E. P., and Williams, F. W., equal; Loebel; Gaboury and Mackenzie and MacNider and Sherrard, equal; Friedman ; Bimson and Kerr and Munn and Wright, equal; Falconer and Wonham, equal; Johnson and Kirsh and Tittensor, equal; Harling and Newman, equal; Humes, Fisk; Echlin and Macoun and Murphy and Ross, equal; Dineen and Gamble and McCallum and McInnis and Martin and Renouf and St. Germain and Senay and Turnbull and Turley, equal.

STRENGTH OF MATERIALS LABORATORY.

Third Year.—*Class I.*—Dunbar, Schippel, Wiggs, Edwards. *Class II.*—Erlenborn, Thomson, Mosher, Ross, Larose; Henry and Macklin, equal; Shapter, Hart, Powell. *Class III.*—Crowe; Lafontaine and Vessot, equal; Windsor, Elder; Bradley and Parnell, equal; Parsons, Mahaffy; Deneau and Kirk and Labell and Rutherford, equal.

MACHINE DESIGN.

Fourth Year (*Electrical Engineering Course*).—*Class I.*—None. *Class II.*—Ord. *Class III.*—None.

Fourth Year (*Mechanical Engineering Course*).—*Class I.*—None. *Class II.*—Standish, Fraser. *Class III.*—Walker.

Third Year.—*Class I.*—Dunbar and Schippel, equal. *Class II.*—None. *Class III.*—Vessot, Windsor.

MAP PROJECTIONS.

Third Year.—*Class I.*—Mahaffy. *Class II.*—Deneau, Powell. *Class III.*—Elder, Hart.

MAPPING.

Second Year.—*Class I.*—None. *Class II.*—Gardner and O'Halloran, equal; O'Sullivan, Maxwell; Brow and Brown and Cuddy and Jackson, equal; Jordan; Bain and Brault and Davis, equal; Fortin and Gliddon and Hill, equal; Challenger and Gauthier and Thompson and VanEtten, equal. *Class III.*—Acton and Stroud, equal; Canning and Gualtieri and Hamilton and Kennedy and Tansley, equal; Brooks and Livingstone, equal; Patterson and Salamis, equal; Scott and Shotwell and Yates, equal; Brandes and Phelan, equal; Mackenzie, Benson. *Unranked.*—Winslow.

MATERIALS OF CONSTRUCTION.

Second Year.—*Class I.*—Cuddy, Bain; Jackson and Jordan, equal; Fortin, Gardner. *Class II.*—Shotwell and Winslow, equal; Brow and Maxwell and Phelan, equal; Clarke and O'Halloran, equal; Gliddon; Canning and Henderson and Yates, equal; Livingstone, Hill; Acton and Murphy, equal. *Class III.*—Stroud; Challenger and Davis and Gauthier and Root and Thompson, equal; Kennedy and Mackenzie, equal; O'Sullivan and Scott and Tansley, equal; Brault and Gualtieri and Salamis, equal; Brandes and Elliot, equal.

MATHEMATICS.

ALGEBRA.

First Year.—*Class I.*—Weldon, Carlyle, Perry. *Class II.*—Messenger, Cousineau, Bonneville, Eager, Morrison; Hague and Tatley, equal; Brown, E. V.; Banfill and Root, equal; Chorney and Gurman, equal; Carson; Wilder and Wonham, equal. *Class III.*—Todd, Brown, L. E.; Bradfield and Mitchell, equal; Taylor, E. P.; Brooks and Taylor, J. F. R., equal; Buchanan and Johnson, equal; Bastable and Nesbitt and Notman and Thompson, equal; Boronow and Macrae, equal; Loebel and Mackenzie, equal; Armstrong and Turton,

equal; Glen and MacNider and Wright, equal; Anderson and Gnaedinger, P. E., and Grant and Williams, F. W., equal; Turley and Wait and Watt, equal; Morris; Clark and Evans and Ross, equal.

ANALYTIC GEOMETRY.

Second Year.—Class I.—Brow, Phelan, Fortin; Brault and O'Halloran, equal. *Class II.*—Canning, Challenger, Gardner; Gliddon and Hill, equal; Jordan, Acton. *Class III.*—Tansley; Brandes and Cuddy, equal; Maxwell; Bain and Gauthier and Livingstone and O'Sullivan, equal; Salamis and Shotwell and Winslow, equal; Jackson and Kennedy and Yates, equal.

CALCULUS.

Third Year.—Class I.—Dunbar. *Class II.*—Schippel, Windsor. *Class III.*—Wiggs, Roberton.

Second Year.—Class I.—Brow; Canning and Gardner, equal. *Class II.*—Fortin, Cuddy, Phelan, Gliddon. *Class III.*—Challenger, Brault, Maxwell, Brandes; Henderson and Livingstone and Winslow, equal; Bain and O'Halloran, equal; Acton and Jackson and Jordan and O'Sullivan and Yates, equal.

GEOMETRY.

First Year.—Class I.—Carlyle; Davis and Perry, equal; Dobson; Bonneville and Weldon, equal. *Class II.*—Carson and Wilder, equal; Chorney; Bastable and Glen, equal; Mitchell; Brooks and Todd, equal; Banfill and Mackenzie and Notman, equal; Anderson; Eager and Gurman and Thompson and Turton, equal; Macrae and Tatley and Taylor, J. F., equal; Cousineau and Gnaedinger, P. E., equal; Boronow and Buchanan and Clark and Munro, equal; Hague and Messenger and Senay and Wright and Williams, F. W., equal; Johnson and MacNider and Taylor, E. P., and Nesbitt, equal; Gamble, Massue; Grant and Loebel and Simons, equal; Fry and Gnaedinger, A. L., and Schleifstein, equal; Falconer and Midgley and Reid, equal; Fisk and Quinlan and Rankin and St. Germain and Scott and Sherrard and Turley and Turnbull and Watt and Wonham, equal.

MECHANICS.

Third Year.— Class I.—Dunbar, Schippel. *Class II.*—Windsor, Vessot. *Class III.*—Lamontagne, Mahaffy, Shapter, Powell.

Second Year.—Class I.—Cuddy, Fortin, Canning, Brow; Gardner and Gliddon, equal; Phelan, Maxwell. *Class II.*—Jackson, Winslow, Murphy, O'Halloran. *Class III.*—Acton and O'Sullivan, equal; Forbes; Bain and Brault, equal; Gibbs and Jordan, equal; Challenger, Hill; Gauthier and Henderson and Muir, equal; Brandes and Kay and Livingstone and Perriton and Yates, equal.

First Year.—Class I.—Carlyle. *Class II.*—Weldon, Chorney; Brown, L. E., and Gurman and Macrae and Messenger, equal; Bradfield and Wilder, equal; Perry; Carson and Notman, equal; Bonneville and Buchanan, equal; Eager, Glen. *Class III.*—Anderson and Fisk and Simons, equal; Loebel; Bastable and Brown, E. V., and Nesbitt, equal; Taylor, J. F. R., and Thompson, equal; Grant and Hague and Mitchell and Wright, equal; Boronow and Falconer and Fry and Morrison and Tatley and Todd, equal; Cousineau and Evans and Wonham, equal; Armstrong and Clark and Mackenzie and Morris and Taylor, E. P., equal; Johnson, Drummond; Banfill and Gamble and Luke and Root, equal; Kerr and Kirsh and McCallum and Midgley and Senay and Turley and Turton and Williams, F. W., equal; Gnaedinger, A. L., and Gnaedinger, P. E., and Hamilton and Newman and Quinlan and Reid, equal.

TRIGONOMETRY.

First Year.—Class I.—Carlyle, Perry, Wilder; Brooks and Weldon, equal; Brown, E. V., and Carson, equal. *Class II.*—Hague, Mitchell, Eager; Chorney and Wonham, equal; Bonneville; Johnson and Tatley, equal; Mackenzie and Messenger, equal; Grant, Evans; Clark and Fry and Luke, equal; Armstrong and Bradfield, equal. *Class III.*—Boronow and Cousineau and Taylor, E. P., and Taylor, J. F. R., equal; Gurman and MacNider and Todd, equal; Banfill and Kirsh and Macrae and Williams, F. W., equal; Gnaedinger, P. E., and Loebel, equal; Gamble and Glen and Quinlan and Simons, equal; Wain; Notman and Wait and Wright, equal; Buchanan and Humes and Root, equal; Falconer and Kerr and Nesbitt and Sherrard, equal; Dineen and Morris and Reid, equal; Drummond and Gnaedinger, A. L., equal; Newman and Turton, equal; St. Germain and Senay, equal; Bastable and Holcomb and Jenks and Watt, equal.

MECHANICAL DRAWING.

Third Year (Electrical Engineering Course).—Class I.—Schippel. *Class II.*—Parnell, Dunbar. *Class III.*—Wiggs, Windsor.

Third Year (Mechanical Engineering Course).—Class I.—None. *Class II.*—None. *Class III.*—Vessot, Shapter.

Second Year.—Class I.—Brault, Cuddy, Fortin. *Class II.*—Jackson, O'Halloran, Gardner; Brow and Kennedy, equal; Challenger and Hill, equal; Gliddon; Bain and Brandes, equal; Canning, Maxwell. *Class III.*—O'Sullivan and Tansley, equal; Hamilton; Gauthier and Phelan, equal; Livingstone; Acton and Gualtieri, equal; Jordan, Yates, Patterson; Mackenzie and Salamis and Voyinovitch, equal. *Unranked*—Brooks, Clarke, Davis, Glen, Murphy, Root, Scott, Stroud, Thompson, Winslow.

First Year.—*Class I.*—Buchanan, Kirsh; Fisk and Loebel, equal; Gnaedinger, P. E., Grant. *Class II.*—Eager; Boronow and Carson and Messenger, equal; Macrae, Gnaedinger, A. L.; Simons and Tatley, equal; Anderson and Fry, equal; Banfill and Bastable and Mitchell and Munro and Weldon, equal; Chorney and Notman and Todd, equal; Bonneville and Mackenzie and Taylor, J. F. R., equal; Carlyle, Bradfield. *Class III.*—Friedman and Gurman and MacNider and St. Germain, equal; Holcomb; Sherrard and Taylor, E. P., and Williams, A. L., equal; Clark; Evans and Gaboury and Johnson and Nesbitt and Tittensor and Wright, equal; Bimson and Falconer, equal; Harling, Schleifstein; Jenks and Kerr and Lyall and Munn and Murphy and Reid and Ross, equal; Newman; Cousineau and Drummond, equal; McInnis and Macoun, equal. *Unranked.*—Armstrong, Brown, E. V., Brown, G. B., Harwood, Humes, Quinlan, Renouf, Turnbull, Wain, Williams, F. W., Wilder, Wonham.

MECHANICAL ENGINEERING.

Third Year (General Course).—*Class I.*—Schippel, Erlenborn, Mosher. *Class II.*—Larose, Dunbar; Elder and Windsor, equal; Bradley and Crowe and Lafontaine, equal; Hart. *Class III.*—Parnell, Ross, Edwards, Labell, Wiggs, Macklin; Cross and Henry, equal.

Third Year (Mechanical Engineering Course).—*Class I.*—Mackenzie. *Class II.*—Thomson, Shapter, Vessot. *Class III.*—None.

MECHANICS OF MACHINES.

Fourth Year.—*Class I.*—Patten. *Class II.*—Fraser. *Class III.*—Standish, Walker.

Third Year.—*Class I.*—Dunbar, Schippel. *Class II.*—Vessot. *Class III.*—Wiggs.

Second Year.—*Class I.*—Canning, Brow, Fortin; Jordan and Phelan, equal; Gardner and Gliddon, equal; Jackson, Challenger. *Class II.*—O'Halloran, Brault, Cuddy; Acton and Maxwell, equal; Bain, Forbes, Gauthier, Livingstone, Salamis. *Class III.*—Tansley and Winslow, equal; Mackenzie and O'Sullivan, equal; Hill, Shotwell, Brandes.

METALLURGY.

Fourth Year.—*Class I.*—None. *Class II.*—Tousaw, Palmer, Wall. *Class III.*—Anderson, Lawrence.

Third Year (Chemistry and Chemical Engineering Courses).—*Class I.*—Larose and Millar, equal. *Class II.*—Mosher, Lafontaine. *Class III.*—Labell, Crowe, Ross.

Third Year (Mining Engineering Course).—*Class I.*—None. *Class II.*—Erlenborn, Edwards. *Class III.*—Leo.

MINE MAPPING.

Third Year.—Class I.—Erlenborn, Edwards. *Class II.*—Jue, Bradley. *Class III.*—Henry.

MINERAL ANALYSIS.

Fourth Year.—Class I.—Tousaw, Wall. *Class II.*—Gerez, Lawrence. *Class III.*—Palmer, Anderson.

MINERALOGY.

Third Year.—Class I.—Erlenborn, Millar. *Class II.*—Mosher, Larose, Edwards, Lafontaine. *Class III.*—Bradley; Crowe and Henry, equal; Jue, Ross; Labell and Parsons, equal.

MINERALOGY (DETERMINATIVE).

Third Year.—Class I.—Erlenborn and Lafontaine, equal; Jue and Millar, equal; Larose, Mosher. *Class II.*—Crowe and Ross, equal; Edwards. *Class III.*—Leo, Bradley, Cloutier, Labell, Cross.

MINING COLLOQUIUM.

Fourth Year.—Class I.—Palmer. *Class II.*—Anderson; Lawrence and Tousaw, equal; Wall. *Class III.*—Gerez.

MINING ENGINEERING.

Fourth Year.—Class I.—Tousaw. *Class II.*—Palmer and Wall, equal; Anderson. *Class III.*—Lawrence, Gerez.

Third Year.—Class I.—Erlenborn, Henry. *Class II.*—Bradley. *Class III.*—Edwards, Jue.

MINING MACHINERY AND DESIGN.

Fourth Year.—Class I.—None. *Class II.*—Tousaw; Anderson and Palmer, equal; Lawrence. *Class III.*—Gerez.

MUNICIPAL ENGINEERING.

Fourth Year.—Class I.—None. *Class II.*—Green, Buchanan; Levin and McLellan, equal; Pitt, Irwin. *Class III.*—McCutcheon, McIntosh; Greene and Lamontagne, equal.

ORE DEPOSITS AND ECONOMIC GEOLOGY.

Fourth Year.—Class I.—Anderson. *Class II.*—Tousaw. *Class III.*—Wall, Gerez.

ORE DRESSING.

Third Year (Chemical Engineering Course).— Class I.—None. *Class II.*—Larose, Crowe, Mosher. *Class III.*—Labell.

ORE DRESSING AND LABORATORY.

Third Year.—Class I.—Erlenborn. *Class II.*—Bradley. *Class III.*—Edwards, Jue, Henry.

ORE DRESSING AND MILLING.

Fourth Year.—Class I.—Tousaw. *Class II.*—Palmer, Wall, Anderson. *Class III.*—Gerez, Lawrence.

ORE DRESSING LABORATORY (THESIS WORK).

Fourth Year.—Class I.—None. *Class II.*—Tousaw, Anderson, Lawrence, Gerez. *Class III.*—Wall, Palmer.

PETROGRAPHY AND LABORATORY.

Fourth Year.—Class I.—Tousaw. *Class II.*—None. *Class III.*—Anderson, Lawrence, Palmer, Gerez.

PHYSICS.

Third Year (Electrical Engineering Course).—Class I.—Dunbar. *Class II.*—Schippel. *Class III.*—None.

Second Year.—Class I.—Gardner. *Class II.*—Brow, Phelan, Canning, Bain, O'Halloran, Cuddy, Maxwell, Gliddon. *Class III.*—Jordan; Brault and Salamis, equal; Fortin, Acton, Livingstone; Jackson and Winslow, equal; Brandes and Challenger and Henderson and Tansley, equal.

First Year.—Class I.—Carlyle, Eager. *Class II.*—Weldon and Wilder, equal; Brown, E. V., Tatley, Todd, Messenger; Gurman and Taybr, E. P., equal; Bastable, Carson; Grant and Thompson, equal; Notman. *Class III.*—Armstrong and Bonneville and Mitchell, equal; Anderson and Banfill and Brooks and Clark and Turnbull and Jenks, equal; Gnaedinger, A. L., and Gnaedinger, P. E., equal; Cousineau and Drummond and Macrae and Turton, equal; Buchanan and Glen, equal; Boronow, Bradfield; Morrison and Munro, equal; Evans and Gamble and MacNider and Williams, F. W., equal; Chorney and Wonham and Wright, equal; Falconer and Kirsh and Loebel and Scott, equal; Hague and Johnson and Reid and Simons, equal; Brown, G. B., and Elliot and Fisk and Gaboury and Holcomb and Humes and Midgley and Newman and Renouf and Sherrard and Taylor, J. F. R., equal.

POWER PLANT DESIGN.

Fourth Year.—Class I.—Fraser. *Class II.*—Patten, Standish, Walker. *Class III.*—None.

RAILWAY ENGINEERING.

Fourth Year.—Class I.—Pitt, McIntosh, Green; Buchanan and McLellan, equal. *Class II.*—Levin. *Class III.*—None.

Third Year. (No. 93).—Class I.—None. *Class II.*—Mahaffy, Elder, Deneau, Powell. *Class III.*—Hart. *Unranked.*—Macklin.

Third Year. (No. 92).—Class I.—None. *Class II.*—Mahaffy, Elder; Macklin and Powell, equal; Deneau. *Class III.*—Hart.

SHOP METHODS.

Second Year.—Class I.—Brow and Cuddy, equal; Jackson, Gardner, Gliddon, Bain, Shotwell; Fortin and Kennedy, equal. *Class II.*—Challenger and Clarke and O'Halloran and Phelan, equal; Brault and Gauthier and Livingstone, equal; Maxwell; Acton and Hill, equal; Gualtieri, Canning; Mackenzie and Thompson, equal. *Class III.*—Scott, Winslow, Tansley, Murphy, Yates, Salamis, Jordan, Patterson, Brandes, O'Sullivan.

First Year.—Class I.—Grant, Munro, Todd, Turnbull, Weldon; Banfill and Clark and Gnaedinger, P. E., and Mitchell, equal; Buchanan; Eager and Macrae and Wilder, equal; Carson, Kirsh. *Class II.*—Bastable and Notman, equal; Humes and Midgley and Reid, equal; Boronow and Johnson, equal; Brown, G. B.; Chorney and Gaboury, equal; Carlyle and Munn, equal; Drummond and MacNider and Sherrard, equal; Fisk and Loebel and Nesbitt and Tatley, equal; Brown, E. V., and Gnaedinger, A. L., equal; Bonneville and Williams, F. W., equal; Messenger and Simons and Williams A. L., equal; Falconer, Kerr; Armstrong and Evans and Fry, equal; Friedman and Harling and Newman, equal. *Class III.*—Brownstone and Taylor, E. P., and Wright, equal; Taylor, J. F. R., Tittensor; Anderson and Bradfield and Wonham, equal; Hague and Lyall and Macoun, equal; Jenks; Bimson and Ross and Renouf, equal; Gamble and McInnis, equal; Gurman and Martin and Rankin, equal; Echlin.

SHOP PROCESSES AND MANAGEMENT.

Third Year.—Class I.—Vessot. *Class II.*—None. *Class III.*—Shapter.

SHOPWORK.

Fourth Year.—Class I.—Standish, Patten. *Class II.*—Fraser, Walker. *Class III.*—None.

Third Year.—Class I.—None. *Class II.*—Vessot, Shapter. *Class III.*—None.

Second Year.—Class I.—Fortin and Shotwell, equal; Bain and Cuddy and Hill and Jackson, equal; Challenger; Brow and Mackenzie and O'Halloran, equal; Gardner and Maxwell, equal; Brault,

Hamilton. *Class II.*—Gliddon; Kennedy and Livingstone and O'Sullivan, equal; Canning and Jordan, equal; Brandes and Phelan, equal; Acton. *Class III.*—Salamis and Tansley, equal; Gauthier and Gualtieri, equal; Benson and Patterson, equal. *Unranked.*—Brooks, Clarke, Davis, Glen, Murphy, Scott, Stroud, Thompson, Winslow.

First Year.—Class I.—Kirsh; Anderson and Mitchell, equal; Grant and Nesbitt, equal; Banfill and Gaboury and Macrae, equal. *Class II.*—Notman and Weldon, equal; Carson and Fry and Gnaedinger, P. E., and Johnson and Loebel and Messenger and Simons, equal; Buchanan and Ross and Taylor, J. F. R., equal; Gurman and MacNider, equal; Kerr; Bradfield and Chorney and Clark, equal; Bastable and Boronow and Drummond and Munn and Munro and Senay, equal; Mackenzie; Fisk and Gnaedinger, A. L., and Schleifstein and Wright, equal; Reid and Williams, A. L., equal; Carlyle and Harling and Jenks and Lyall and Tatley, equal; Cousineau and Holcomb and St. Germain, equal; Eager and Evans, equal. *Class III.*—Newman, Taylor, E. P.; Falconer and McInnis, equal; Brownstone and Friedman and Midgley and Sherrard, equal; Martin; Bimson and Turley, equal; Murphy and Tittensor, equal. *Unranked.*—Armstrong, Brown, E. V., Brown, G. B., Dawes, Dineen, Hague, Harwood, Humes, McCallum, Massue, Renouf, Turnbull, Wilder, Williams, F. W., Wonham.

STRENGTH OF MATERIALS.

Fourth Year.—Class I.—McIntosh. *Class II.*—Pitt; Buchanan and Levin, equal; McCutcheon. *Class III.*—McLellan, Irwin.

Third Year.—Class I.—Dunbar, Greene, Mosher, Schippel, Ross, Erlenborn. *Class II.*—Thomson, Vessot, Edwards, Larose, Labell, Lamontagne; Mackenzie and Smith, equal. *Class III.*—Crowe Bradley, Windsor, Parsons, Shapter, Powell, Macklin.

STRUCTURAL DESIGN.

Third Year.—Class I.—Erlenborn, Larose; Crowe and Thomson, equal; Lamontagne. *Class II.*—Mosher, Edwards, Vessot, Lafontaine, Labell. *Class III.*—Powell, Bradley, Deneau; Parsons and Rutherford, equal; Henry; Elder and Mahaffy, equal; Hart and Macklin, equal.

SUMMER ESSAYS.

Fourth Year (Chemistry and Chemical Engineering Courses).—Class I.—None. *Class II.*—Brennen, H. J., and Mouquin, equal; Amdur and Brennen, J. H., and Proudfoot, equal. *Class III.*—Levitt, Laing.

Fourth Year (Civil Engineering Course).—Class I.—None. *Class II.*—Buchanan and Pitt, equal; Lamontagne. *Class III.*—None.

Fourth Year (*Electrical Engineering Course*).—*Class I.*—None. *Class II.*—Arbuckle. *Class III.*—None.

Fourth Year (*Mechanical Engineering Course*).—*Class I.*—None. *Class II.*—Fraser. *Class III.*—Patten and Standish, equal.

Fourth Year (*Mining Engineering Course*).—*Class I.*—Palmer. *Class II.*—Wall. *Class III.*—Lawrence, Gerez.

Third Year (*Chemistry and Chemical Engineering Courses*).—*Class I.*—None. *Class II.*—None. *Class III.*—Cross.

Third Year (*Civil Engineering Course*).—*Class I.*—None. *Class II.*—McLellan. *Class III.*—None.

Third Year (*Electrical Engineering Course*).—*Class I.*—None. *Class II.*—Dunbar. *Class III.*—None.

Third Year (*Mechanical Engineering Course*).—*Class I.*—None. *Class II.*—Shapter. *Class III.*—None.

SUMMER READING.

Third Year.—*Class I.*—Hoichberg, Lafontaine. *Class II.*—Millar; Mosher and Schippel, equal; Jue and Larose, equal. *Class III.*—Erlenborn and Ross, equal; Wiggs, Labell, Hart, Cloutier, Deneau.

Second Year.—*Class I.*—Canning, O'Halloran, Jackson. *Class II.*—Bain, Shotwell; Gardner and Phelan, equal. *Class III.*—Binmore and Gauthier, equal; Grout; Jordan and Salamis, equal; Brault, Henderson; Brow and Cromwell and Kennedy, equal; Acton, Mackenzie, Yates.

SUMMER SCHOOLS.

Third Year (*Inorganic Qualitative Analysis*).—*Class I.*—Lafontaine. *Class II.*—Mosher, Larose, Labell. *Class III.*—Kirk.

Third Year (*Inorganic Qualitative Analysis Laboratory*).—*Class I.*—Mosher, Lafontaine. *Class II.*—Larose. *Class III.*—Kirk and Labell, equal.

Third Year (*Mechanical Drawing*).—*Class I.*—Schippel, Wiggs. *Class II.*—None. *Class III.*—Shapter, Dunbar.

Third Year (*Physics*).—*Class I.*—Dunbar. *Class II.*—None. *Class III.*—Schippel, Wiggs.

Third Year (*Shopwork*).—*Class I.*—Schippel. *Class II.*—Shapter, Wiggs, Dunbar. *Class III.*—None.

SURVEYING.

Third Year (*Civil Engineering Course*).—*Class I.*—Deneau. *Class II.*—Powell. *Class III.*—Elder.

Third Year (*Mining Engineering Course*).—*Class I.*—Erlenborn. *Class II.*—None. *Class III.*—Edwards.

Second Year.—*Class I.*—Jordan; Cuddy and Fortin, equal; Brow, Winslow, Canning; Brault and Jackson, equal. *Class II.*—Gardner, Gliddon, Bain, Gauthier, Phelan; Forbes and O'Sullivan, equal; Hill and

O'Halloran, equal; Hyndman. *Class III.*—Acton, Maxwell; Challenger and Shotwell, equal; Tansley, Brandes, Kennedy; Gualtieri and Mackenzie and Patterson and Salamis and Yates, equal.

SURVEYING FIELDWORK.

Third Year.—Class I.—Mahaffy. *Class II.*—Powell, Erlenborn. *Class III.*—Deneau, Hart.

Second Year.—Class I.—Cuddy. *Class II.*—Jackson, Kennedy; Gliddon and Maxwell and O'Sullivan, equal; Gardner, Canning, Bethune; Brow and Challenger, equal; Brault and Gauthier and Grout and Phelan, equal; Bain and Jordan and Shotwell and VanEtten, equal; Cromwell; Gualtieri and Stroud, equal; Brandes and Patterson, equal. *Class III.*—Salamis, Acton.

THEORY OF STRUCTURES.

Fourth Year.—Class I.—McIntosh. *Class II.*—Pitt, Buchanan. *Class III.*—McLellan, Levin, Green, Irwin.

THERMODYNAMICS.

Fourth Year (Mechanical Engineering Course).—Class I.—None. *Class II.*—Fraser. *Class III.*—Walker.

Fourth and Third Years.—Class I.—Wallace. *Class II.*—None. *Class III.*—Vessot, Ord.

WORKS ORGANIZATION AND ACCOUNTING.

Fourth Year.—Class I.—Fraser. *Class II.*—None. *Class III.*—Standish.

DATE DUE

Sept. 30

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